

Dickerson et al.	2011	759826
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Branchi et al.	2002	787645
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Branchi et al.	2002	787645

serum estradiol, progesterone, testosterone

prostate weight

serum testosterone and estradiol

developmental milestones

number of pups, offspring mortality

pup sex ratio

pup weight

incisor eruption

open field test

modified Fox battery: righting reflex, forelimb stick grasp reflex, forelimb placing reflexes, vertical screen test, screen climbing test, pole grasping, negative geotaxis, homing test

open field test, ultrasonic vocalizations

gestation length

Sex hormone levels, male	Reproductive
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Reproductive organ size/weight, male	Reproductive
Sex hormone levels, male	Reproductive
Developmental milestones	Developmental
Offspring mortality	Developmental
Sex ratio	Developmental
Weight and size (early life)	Developmental
Dental effects	Musculoskeletal
Activity level	Nervous System

Motor function	Nervous System
Emotional state/affective behavior	Nervous System

Gestation length and preterm birth	Reproductive
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Aroclor 1221

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Rat	Injection-ip
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Rat	Injection-ip
Rat	Injection-ip
Mouse	Oral-gavage
Mouse	Oral-gavage
Mouse	Oral-gavage
Mouse	Oral-gavage
Mouse	Oral-gavage
Mouse	Oral-gavage

Mouse	Oral-gavage
Mouse	Oral-gavage

Mouse	Oral-gavage
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30

30

16

no

16

N/A	2		
N/A	2		
			N/A
			N/A
			N/A
N/A	6	N/A	
			N/A

N/A	6	N/A	
			N/A

GDs 16 & 180, 1 mg/kg-day

Wistar rats were exposed to 2 mg/kg-d AR 1254 via IP injection for 30 days. Animals were 90 d old at start (180-200 g). Prostate weights (reported Figure 1B) and testosterone and estradiol were measured (reported Figure 2A and 2B).

Wistar rats were exposed to 2 mg/kg-d AR 1254 via IP injection for 30 days. Animals were 90 d old at start (180-200 g). Prostate weights (reported Figure 1B) and testosterone and estradiol were measured (reported Figure 2A and 2B).

Mouse dams exposed GD6-PND21; pup weight altered by PND16
Litter size of LOAEL dose group was ~16, as shown in Fig 1; litters culled to 8 pups at birth

Mouse dams exposed GD6-PND21; open field behavior (thigmotaxis and habituation) altered by PND60
Litter size of LOAEL dose group was ~16, as shown in Fig 1; litters culled to 8 pups at birth

6 mg/kg-d AR1254 was administered via gavage to CD-1 swiss female mice from GD6 to PND 21 (37 days). Since all maternal reproductive effects were measured at parturition, exposure duration is 12 days (18-6=12). At experiment onset mice weighted 25-27 g, age is NR. At birth, litters were culled to 8 pups. Authors examined percentage of pregnancies carried to term, pregnancy duration- authors report no SS effects.

22	0.9	0.094	0.154	10	21
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18	0.9	0.229	0.264	6	21

18	0.9	0.229	0.264	6	21
----	-----	-------	-------	---	----

Adequate	Good	Adequate
Adequate	Good	Adequate
Adequate	Good	Adequate
Adequate	Good	Adequate
Adequate	Good	Adequate
Adequate	Good	Adequate
Adequate	Good	Adequate
Adequate	Good	Adequate
Adequate	Good	Adequate

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Pereira and Rao	2007	789216
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Bitman and Harris	1972	831152
Bitman and Harris	1972	831152
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Jonsson et al.	1975	1061281
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Heinonen et al.	1981	1253088
Heinonen et al.	1981	1253088

maternal weight gain

microsomal enzyme (cytochrome P-450 isozymes, uridine diphosphoglucuronyl transferase-UDPGT activity), EROD, MRO

microsomal enzyme (cytochrome P-450 isozymes, uridine diphosphoglucuronyl transferase-UDPGT activity), EROD, MRO

litter size

histologyliver weightALP, LDH, ACP

histologyliver weightALP, LDH, ACP

histologyliver weightALP, LDH, ACP

liver lipidsliver weightliver vitamin A concentration and content

liver lipidsliver weightliver vitamin A concentration and content

liver lipidsliver weightliver vitamin A concentration and content

liver cholesterol levelsliver weight (relative)

liver cholesterol levelsliver weight (relative)

estrous cycle

litter size

litter production

ovarian histopathology

plasma progesterone, 17-hydroxyprogesterone

estrous cycle

litter size

litter production

ovarian histopathology

plasma progesterone, 17-hydroxyprogesterone

estrous cycle

litter size

litter production

ovarian histopathology

plasma progesterone, 17-hydroxyprogesterone

estrous cycle

litter size

litter production

ovarian histopathology

plasma progesterone, 17-hydroxyprogesterone

enzyme inductionliver histopathology

enzyme inductionliver histopathology

Maternal weight gain	Reproductive
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Pregnancy/conception rate	Reproductive
Liver Histopathology	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Serum Biomarkers of Liver Health & Function	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Micronutrients	Hepatobiliary
Cholesterol	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Estrous/menstrual cycle characteristics	Reproductive

Pregnancy/conception rate	Reproductive
Reproductive organ histopathology, female	Reproductive

Sex hormone levels, female	Reproductive
Liver Enzyme Induction	Hepatobiliary
Liver Histopathology	Hepatobiliary

Aroclor 1254

Aroclor 1254

Aroclor 1254

Clophen A60

Clophen A60

Clophen A60

Clophen A60

Aroclor 1242

Aroclor 1242

Aroclor 1242

Aroclor 1248

Aroclor 1248

Aroclor 1242

Aroclor 1242

Aroclor 1242

Aroclor 1242

Clophen C

Clophen C

Primary

Primary

Primary

Primary

Primary

Primary

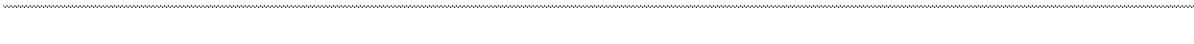
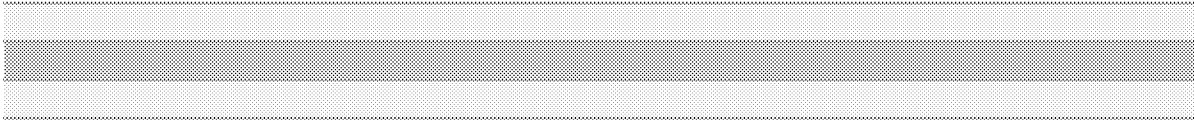
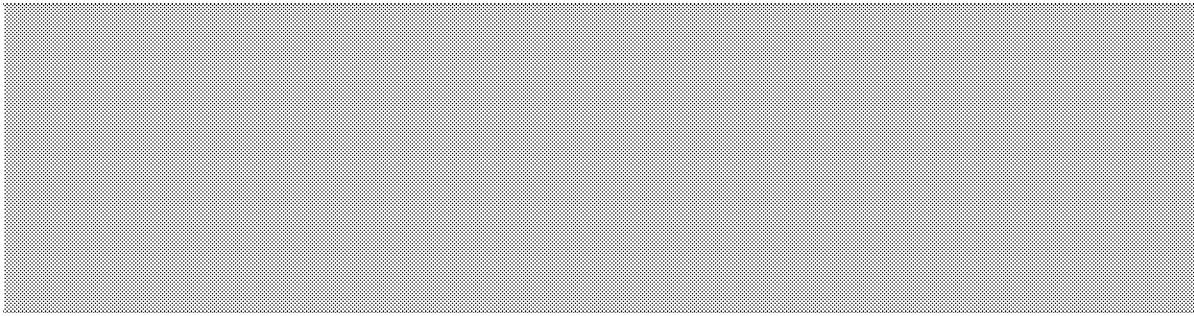
150

56252

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N/A

6 mg/kg-d AR1254 was administered via gavage to CD-1 swiss female mice from GD6 to PND 21 (37 days). Since all maternal reproductive effects were measured at parturition, exposure duration is 12 days (18-6=12). At experiment onset mice weighted 25-27 g, age is NR. At birth, litters were culled to 8 pups. Authors examined percentage of pregnancies carried to term, pregnancy duration- authors report no SS effects.

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Cai et al.	2011	1294114
Cai et al.	2011	1294114
Martin and Klaassen	2010	1294814
Martin and Klaassen	2010	1294814
Lilienthal et al.	2006	1298501
Lilienthal et al.	2006	1298501
Lilienthal et al.	2006	1298501

locomotor activity

striatal dopamine levels

brain weight

DPOAE amplitudes

litter size

dam gestational and lactational weight gain

litter size

dam gestational and lactational weight gain

liver weight of F0 and F1 animals

testis histopathology

testis weight

serum estradiol, testosterone

epididymal sperm counts, sperm mortality, sperm abnormality

P450 activityliver weight

P450 activityliver weight

brain weight (F0)

brain weight (F1)

sweet preference

Activity level	Nervous System
Neurotransmitter levels	Nervous System
Brain-histological, structural, morphological	Nervous System
Sensory function	Nervous System
Maternal weight gain	Reproductive
Pregnancy/conception rate	Reproductive
Liver Weight/Hepatomegaly	Hepatobiliary
Reproductive organ histopathology, male	Reproductive
Reproductive organ size/weight, male	Reproductive
Sex hormone levels, male	Reproductive
Sperm/semen parameters	Reproductive
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Brain-histological, structural, morphological	Nervous System
Brain-histological, structural, morphological	Nervous System
Emotional state/affective behavior	Nervous System

Aroclor 1254

Aroclor 1254

Fox River PCB mixture

Fox River PCB mixture

Fox River PCB mixture

Fox River PCB mixture

Fox River PCB mixture

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1242Aroclor 1254

Aroclor 1242Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Mouse	Oral-cookie
Mouse	Oral-cookie
Rat	Oral-cookie
Rat	Oral-cookie
Rat	Oral-cookie
Rat	Oral-cookie
Mouse	Oral-gavage
Mouse	Oral-gavage
Mouse	Oral-gavage
Mouse	Oral-gavage
Rat	Oral-gavage
Rat	Oral-gavage
Rat	Injection-sc
Rat	Injection-sc
Rat	Injection-sc

Primary	63
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Primary	63
Secondary	
Secondary	
Primary	67

Primary	67
---------	----

Primary	21
Primary	21

Primary	21
Primary	21

Primary	
Secondary	
Secondary	

28

28

no

10

no

10

71

71

50

50

50

50

				2	6	25
				2	6	25
43	2	2	3	6		

122	2	2	3	6		
				2	3	6
				2	3	6
				2	0.0017	0.17
				2	0.0017	0.17
				2	0.0017	0.17
				2	0.0017	0.17

N/A	6	
N/A	6	
3	6	N/A

3	6	N/A
0.017	0.17	
0.017	0.17	
0.017	0.17	
0.017	0.17	
		N/A
		N/A
		N/A

Male mice (8 wk old at arrival) were acclimated for 1 wk prior to dosing for 4 wk. Alterations in vertical, horizontal and ambulatory activity.

Male mice (8 wk old at arrival) were acclimated for 1 wk prior to dosing for 4 wk. Increased striatal DA levels.

Rat dams dosed for 28 d before breeding and throughout gestation and lactation (until weaning PND 21). Brain weights were measured on PND 21 and decreases were observed at 6 mg/kg. On PND 2, litters were culled to 10 pups; use default.

Rat dams dosed for 28 d before breeding and throughout gestation and lactation (until weaning PND 21). DPOAE measurements were taken at approximately PND 100, and decreases were observed at 6 mg/kg. On PND 2, litters were culled to 10 pups; use default.

Male weanlings were dosed with 0, 5, 50, or 500 ug/kg-day every 3 days for 50 days. LOAEL is based on degenerative alterations in testis (reported qualitatively by authors in text).

Male weanlings were dosed with 0, 5, 50, or 500 ug/kg-day every 3 days for 50 days. LOAEL is based on decreased relative testis weight (Table 1); note absolute testis weight was also decreased, but not significantly.

Male weanlings were dosed with 0, 5, 50, or 500 ug/kg-day every 3 days for 50 days. LOAEL is based on decreased estradiol (Figure 5).

Male weanlings were dosed with 0, 5, 50, or 500 ug/kg-day every 3 days for 50 days. LOAEL is based on effects on sperm counts, mortality, and abnormality (Table 1).

Pregnant rat dams injected with 30 mg/kg from GD 10-18. No effect on dam brain weight (Table 2).

Pregnant rat dams injected with 30 mg/kg from GD 10-18. No effect on offspring brain weight (Table 2).

Pregnant rat dams injected with 30 mg/kg from GD 10-18. No alterations in sweet preference (Figure 3).

18	0.9	0.229	0.264	6	21
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22	0.9	0.094	0.154	10	21
----	-----	-------	-------	----	----

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----	-----	-------	-------	---	----

18	0.9	0.229	0.264	6	21
----	-----	-------	-------	---	----

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----	-----	-------	-------	---	----

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Lilienthal et al.	2006	1298501
Lilienthal et al.	2006	1298501
Lilienthal et al.	2006	1298501
Lilienthal et al.	2006	1298501
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Innami et al.	1976	1300708
Shiota	1976	1300832
Shiota	1976	1300832
Shiota	1976	1300832
Shiota	1976	1300832
Shiota	1976	1300832
Shiota	1976	1300832

ovarian follicle number

puberty onset, female

puberty onset, male

serum estradiol, testosterone (F0)

serum estradiol, testosterone (F1)

serum estradiol, testosterone (F1)

liver weight

liver weight, liver weight per 100g body weightliver vitamin A

liver weight, liver weight per 100g body weightliver vitamin A

birth defects

litter size, resorptions, number of dead fetuses

pup weight

open field test

water T-maze test

water T-maze test

open field test

Ovulation	Reproductive
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Pubertal development, female	Reproductive
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Pubertal development, male	Reproductive
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Sex hormone levels, female	Reproductive
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Sex hormone levels, female	Reproductive
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Sex hormone levels, male	Reproductive
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Liver Weight/Hepatomegaly	Hepatobiliary
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Liver Weight/Hepatomegaly	Hepatobiliary
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Micronutrients	Hepatobiliary
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Birth defects	Developmental
---------------	---------------

Offspring mortality	Developmental
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Weight and size (early life)	Developmental
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Activity level	Nervous System
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Cognitive function	Nervous System
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Cognitive function	Nervous System
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Emotional state/affective behavior	Nervous System
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Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

PCBs

PCBs

Kanechlor 500

Kanechlor 500

Kanechlor 500

Kanechlor 500

Kanechlor 500

Kanechlor 500

Kanechlor 500

Rat	Injection-sc
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Rat	Injection-sc
Rat	Injection-sc

Rat	Injection-sc
Rat	Injection-sc

Rat	Injection-sc
Rat	Injection-sc
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-gavage
Rat	Oral-gavage

Rat	Oral-gavage
Rat	Oral-gavage

Rat	Oral-gavage
Rat	Oral-gavage
Rat	Oral-gavage

Secondary	
Secondary	
Secondary	

Primary	56
Secondary	
Secondary	
Secondary	

Secondary	
Secondary	
Secondary	
Secondary	
Secondary	
Secondary	
Secondary	

10	18 N/A	N/A	21
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10	18 N/A	N/A	21
----	--------	-----	----

10	18 N/A	N/A	21
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10	18 N/A	N/A	21
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15	21 N/A	N/A	7
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8	14 N/A	N/A	0
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8	14 N/A	N/A	21
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15	21 N/A	N/A	21
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N/A 30 N/A

N/A 30 N/A

N/A 30 N/A

N/A 30

N/A

N/A 30 N/A

N/A

20 100 N/A

20 100 N/A

N/A

N/A 20 N/A

N/A 20 N/A

N/A

Pregnant rat dams injected with 30 mg/kg from GD 10-18. Study reports litter sizes between 5-10 pups were used. LOAEL is based on altered ovarian follicle counts in F1 females at PND220 (Table 4).

Pregnant rat dams injected with 30 mg/kg from GD 10-18. Study reports litter sizes between 5-10 pups were used. LOAEL is based on delayed pubertal onset in F1 females (Table 3).

Pregnant rat dams injected with 30 mg/kg from GD 10-18. Study reports litter sizes between 5-10 pups were used. LOAEL is based on delayed pubertal onset in F1 males (Table 3).

Pregnant rat dams injected with 30 mg/kg from GD 10-18. LOAEL based on decreased estradiol in F0 dams on GD 19 (Figure 2). Starting age reported as "females at sexual maturity"; assume 56 d.

Pregnant rat dams injected with 30 mg/kg from GD 10-18. Study reports litter sizes between 5-10 pups were used. There was no effect on estradiol or testosterone in F1 females at PND 21 (Figure 2).

Pregnant rat dams injected with 30 mg/kg from GD 10-18. Study reports litter sizes between 5-10 pups were used. LOAEL is based on decreased estradiol in F1 males on PND 21 (Figure 2).

Dosing from GD15-21 (rats); pups died by PND7
Litter size of LOAEL dose group reported in Table 1; litters culled to 8 pups on PND4

Dosing from GD8-14 (rats); fetal weight evaluated on GD21
Litter size of LOAEL dose group reported in Table 1

Dosing from GD8-14 (rats); multi-T water maze performance evaluated at 13 weeks of age
Litter size of LOAEL dose group reported in Table 1; litters culled to 8 pups on PND4

Dosing from GD15-21 (rats); multi-T water maze performance evaluated at 13 weeks of age
Litter size of LOAEL dose group reported in Table 1; litters culled to 8 pups on PND4

22	0.9	0.094	0.154	10	21
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Adequate	Good	Adequate
Adequate	Good	Adequate
Adequate	Good	Adequate
Adequate	Good	Adequate
Adequate	Good	Adequate
Adequate	Good	Adequate
Adequate	Good	Adequate

Shiota	1976	1300833
Shiota	1976	1300833
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Elnar et al.	2012	1323584
Elnar et al.	2012	1323584
Elnar et al.	2012	1323584
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Takabatake and Fukuhara	1978	1334542
Takabatake and Fukuhara	1978	1334542

number of viable fetuses (GD21) or viable pups (after delivery)
maternal weight gain

number of viable fetuses (GD21) or viable pups (after delivery)
maternal weight gain

protein microsomal fractionsliver weight

protein microsomal fractionsliver weight

liver microsomal enzymesliver weightheptic vitamin A, hepatic vitamin E

liver microsomal enzymesliver weightheptic vitamin A, hepatic vitamin E

liver microsomal enzymesliver weightheptic vitamin A, hepatic vitamin E

maternal body weights during gestation and lactation

liver microsomal protein, DMAP N-demethylase, benzo[a]pyrene hydroxylase, aldrin epoxidase, cytochrome P-450, EROD

liver microsomal protein, DMAP N-demethylase, benzo[a]pyrene hydroxylase, aldrin epoxidase, cytochrome P-450, EROD

liver microsomal protein, DMAP N-demethylase, benzo[a]pyrene hydroxylase, aldrin epoxidase, cytochrome P-450, EROD

relative liver weight (pups)

induction of hepatic enzyme activity CYP1A (ethoxyresorufin O-dealkylation and methoxyresorufin O-dealkylation), CYP2

induction of hepatic enzyme activity CYP1A (ethoxyresorufin O-dealkylation and methoxyresorufin O-dealkylation), CYP2

enzyme activity (ETR O-dealkylation, MTR O-dealkylation, PTR O-dealkylation, BZR O-dealkylation), induction of microsomal

enzyme activity (ETR O-dealkylation, MTR O-dealkylation, PTR O-dealkylation, BZR O-dealkylation), induction of microsomal

enzyme activity (ETR O-dealkylation, MTR O-dealkylation, PTR O-dealkylation, BZR O-dealkylation), induction of microsomal

DNA synthesis via BrdU incorporation

UDP-GT induction

cholesterol

liver enzyme activitieshistologyliver weight

liver enzyme activitieshistologyliver weight

liver enzyme activitieshistologyliver weight

pup weight

open field

forelimb grip strength, water escape pole climbing, negative geotaxis

Morris water maze

elevated plus maze, light dark box, tail suspension, open field

maternal behavior

maternal weight gain

activities of hepatic enzymes (Cytochrome P-450; Cytochrome b; NADPH-cytochrome c. reductase; Aminopyrine N-demethylation)

activities of hepatic enzymes (Cytochrome P-450; Cytochrome b; NADPH-cytochrome c. reductase; Aminopyrine N-demethylation)

Maternal weight gain	Reproductive
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Pregnancy/conception rate	Reproductive
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Micronutrients	Hepatobiliary

Maternal weight gain	Reproductive
Liver Enzyme Induction	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary

Liver Cell Proliferation	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Cholesterol	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary

Weight and size (early life)	Developmental
Activity level	Nervous System

Motor function	Nervous System
Cognitive function	Nervous System

Emotional state/affective behavior	Nervous System
Social behavior/development	Nervous System
Maternal weight gain	Reproductive
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary

Kanechlor 300Kanechlor 500

Kanechlor 300Kanechlor 500

Phenochlor DP6

Phenochlor DP6

PCBs

PCBs

PCBs

Aroclor 1254

Breast milk mixture: PCBs 28, 52, 66, 101, 105, 118, 128, 138, 146, 156, 170, 180, 183, 187

Breast milk mixture: PCBs 28, 52, 66, 101, 105, 118, 128, 138, 146, 156, 170, 180, 183, 187

Breast milk mixture: PCBs 28, 52, 66, 101, 105, 118, 128, 138, 146, 156, 170, 180, 183, 187

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Clophen A50

Clophen A60

Clophen A60

Clophen A60

Mixture: PCBs 28, 52, 101, 138, 153, 180

Mixture: PCBs 28, 52, 101, 138, 153, 180

Mixture: PCBs 28, 52, 101, 138, 153, 180

Mixture: PCBs 28, 52, 101, 138, 153, 180

Mixture: PCBs 28, 52, 101, 138, 153, 180

Mixture: PCBs 28, 52, 101, 138, 153, 180

Mixture: PCBs 28, 52, 101, 138, 153, 180

Kanechlor 500

Kanechlor 500

Rat	Oral-diet
-----	-----------

Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet

Rat	Oral-gavage
Rat	Injection-ip
Rat	Injection-ip
Rat	Injection-ip
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Mouse	
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet

Mouse	Oral-gavage
Mouse	Oral-gavage

Mouse	Oral-gavage
Mouse	Oral-gavage

Mouse	Oral-gavage
Mouse	Oral-gavage
Mouse	Oral-gavage
Rat	Oral-diet
Rat	Oral-diet

Primary

Primary

Primary

Secondary

Secondary

Secondary

Secondary

Secondary

Primary

Primary

GD0-sacrifice

GD0-sacrifice

10

10

no

10

[illegible]

[illegible]

Rat dams dosed from GD 6 - PND 21 to 0, 1, or 6 mg/kg-day. Text states there was no effect on maternal body weights during gestation or lactation (data not shown).

Dams exposed PND0-21; pup weight altered by PND4
Litters culled to 10 on PND0

Litters culled to 10 on PND0

Dams exposed PND0-21; elevated plus maze behavior altered at PND40
Litters culled to 10 on PND0

22	0.9	0.094	0.154	10	21
----	-----	-------	-------	----	----

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

CHECK	0.9	CHECK	CHECK	CHECK	CHECK
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21

18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21

18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

Bavithra et al.	2012	1402037
Curran et al.	2011	1402199
Curran et al.	2011	1402199

Curran et al.	2011	1402199
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Curran et al.	2011	1402199
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Curran et al.	2011	1402199
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cerebellar histopathology

pup body weight

corticosterone

open field activity

long-term potentiation, brain histopathology

novel object recognition, Morris water maze

Brain-histological, structural, morphological	Nervous System
Weight and size (early life)	Developmental
HPA hormones	Endocrine

Activity level	Nervous System
Brain-histological, structural, morphological	Nervous System

Cognitive function	Nervous System
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Aroclor 1254

Mixture: PCBs 77, 105, 118, 126, 138, 153, 169, 180

Mixture: PCBs 77, 105, 118, 126, 138, 153, 169, 180

Mixture: PCBs 77, 105, 118, 126, 138, 153, 169, 180

Mixture: PCBs 77, 105, 118, 126, 138, 153, 169, 180

Mixture: PCBs 77, 105, 118, 126, 138, 153, 169, 180

30

no

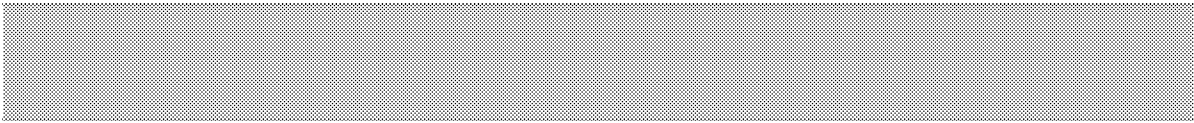
6

no

6

no

6



10.5 23 N/A N/A 28



10.5 23 N/A N/A 28

10.5 23 N/A N/A 28

Adult male wistar rats (180-200 g) dosed for 30 d. Qualitative images shown in Figure 4 of PCB-induced cerebellar damage.

Dams exposed GD10.5 and PND5; open field activity altered at PND60

Dose calculated from information provided in Table S1: PCBs 105, 118, 138, 153, and 180 = 10 mg/kg/dose each (total 50 mg/kg/dose for these 5 congeners); PCB 77 = 5mg/kg/dose; PCB 126 = 0.025 mg/kg/dose; PCB 169 = 0.25 mg/kg/dose (55.275 mg/kg/dose total PCBs). Two doses were administered, 14 days apart (GD10.5 and PND5). Adjusted for continuous dosing, dose = (55.275 mg/kg/dose*2 doses)/14 days = 7.9 mg/kg-day
Litter size NR; use default

Dams exposed GD10.5 and PND5; long-term potentiation altered at PND30-35

Dose calculated from information provided in Table S1: PCBs 105, 118, 138, 153, and 180 = 10 mg/kg/dose each (total 50 mg/kg/dose for these 5 congeners); PCB 77 = 5mg/kg/dose; PCB 126 = 0.025 mg/kg/dose; PCB 169 = 0.25 mg/kg/dose (55.275 mg/kg/dose total PCBs). Two doses were administered, 14 days apart (GD10.5 and PND5). Adjusted for continuous dosing, dose = (55.275 mg/kg/dose*2 doses)/14 days = 7.9 mg/kg-day
Litter size NR; use default

Dams exposed GD10.5 and PND5; Morris water maze performance altered after PND 74

Dose calculated from information provided in Table S1: PCBs 105, 118, 138, 153, and 180 = 10 mg/kg/dose each (total 50 mg/kg/dose for these 5 congeners); PCB 77 = 5mg/kg/dose; PCB 126 = 0.025 mg/kg/dose; PCB 169 = 0.25 mg/kg/dose (55.275 mg/kg/dose total PCBs). Two doses were administered, 14 days apart (GD10.5 and PND5). Adjusted for continuous dosing, dose = (55.275 mg/kg/dose*2 doses)/14 days = 7.9 mg/kg-day
Litter size NR; use default

22	0.9	0.094	0.154	10	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21

18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21

18	0.9	0.229	0.264	6	21
----	-----	-------	-------	---	----

Adequate	Good	Adequate
Adequate	Good	Adequate
Adequate	Good	Adequate
Adequate	Good	Adequate
Adequate	Good	Adequate

Curran et al.	2011	1402199
Curran et al.	2011	1402199
Tian et al.	2011	1402374
Tian et al.	2011	1402374
Tian et al.	2011	1402374
Tian et al.	2011	1402374
Curran et al.	2011	1402788
Curran et al.	2011	1402788
Curran et al.	2011	1402788
Curran et al.	2011	1402788
Curran et al.	2011	1402788
Curran et al.	2011	1402788

elevated zero maze, acoustic startle response w/prepulse inhibition (PPI)

neurotransmitters

pup weight

open field test

novel object test, Y-maze test

open field test, elevated plus maze test, tail suspension test

% dystocia (difficult births)

gestation length (either premature birth or gestation longer than 19.5 days)

litter size

% dystocia (difficult births)

gestation length (either premature birth or gestation longer than 19.5 days)

litter size

% dystocia (difficult births)

gestation length (either premature birth or gestation longer than 19.5 days)

litter size

CYP1A1 and CYP1A2 mRNA levelsliver histology in dams at PND28liver weights

CYP1A1 and CYP1A2 mRNA levelsliver histology in dams at PND28liver weights

CYP1A1 and CYP1A2 mRNA levelsliver histology in dams at PND28liver weights

Emotional state/affective behavior	Nervous System
Neurotransmitter levels	Nervous System
Weight and size (early life)	Developmental

Activity level	Nervous System
Cognitive function	Nervous System

Emotional state/affective behavior	Nervous System
Dystocia	Reproductive

Gestation length and preterm birth	Reproductive
Pregnancy/conception rate	Reproductive
Liver Enzyme Induction	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary

Mixture: PCBs 77, 105, 118, 126, 138, 153, 169, 180

Mixture: PCBs 77, 105, 118, 126, 138, 153, 169, 180

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Mixture: PCBs 77, 105, 118, 126, 138, 153, 169, 180

Mixture: PCBs 77, 105, 118, 126, 138, 153, 169, 180

Mixture: PCBs 77, 105, 118, 126, 138, 153, 169, 180

Mixture: PCBs 77, 105, 118, 126, 138, 153, 169, 180

Mixture: PCBs 77, 105, 118, 126, 138, 153, 169, 180

Mixture: PCBs 77, 105, 118, 126, 138, 153, 169, 180

Secondary	
Secondary	
Secondary	
Secondary	
Secondary	
Secondary	
Primary	

Primary
Primary

no

6

no

6

no

6

no

6

17

17

17

Category	Value
78	78
2	2
2	2
7.9	7.9
7.9	7.9

53	5	2	6	18
53	5	2	6	18

53	5	2	6	18
		2		
		2		
		2		

Dams exposed GD10.5 and PND5; elevated zero maze activity and acoustic startle response with prepulse inhibition altered after PND60

Dose calculated from information provided in Table S1: PCBs 105, 118, 138, 153, and 180 = 10 mg/kg/dose each (total 50 mg/kg/dose for these 5 congeners); PCB 77 = 5mg/kg/dose; PCB 126 = 0.025 mg/kg/dose; PCB 169 = 0.25 mg/kg/dose (55.275 mg/kg/dose total PCBs). Two doses were administered, 14 days apart (GD10.5 and PND5).

Adjusted for continuous dosing, dose = (55.275 mg/kg/dose*2 doses)/14 days = 7.9 mg/kg-day

Litter size NR; use default

Dams exposed PND7-21 and pups dosed directly PND22 to the end of behavioral testing; open field activity altered at PND35-37

Litter size NR; use default

Dams exposed PND7-21 and pups dosed directly PND22 to the end of behavioral testing; novel object recognition altered at PND35-37

Litter size NR; use default

Dams exposed PND7-21 and pups dosed directly PND22 to the end of behavioral testing; open field activity altered at PND35-37

Litter size NR; use default

Dosed on GD10.5 and PND5PCB mixture (see below):5 mg/kg-day PCB 7725 ug/kg-day PCB 126250 ug/kg-day PCB 16910

Dosed on GD10.5 and PND5PCB mixture (see below):5 mg/kg-day PCB 7725 ug/kg-day PCB 126250 ug/kg-day PCB 16910

Dosed on GD10.5 and PND5PCB mixture (see below):5 mg/kg-day PCB 7725 ug/kg-day PCB 126250 ug/kg-day PCB 16910

Lu et al.	2010	1403045
Lu et al.	2010	1403045
Lu et al.	2010	1403045
Ateşşahin et al.	2010	1403617
Ateşşahin et al.	2010	1403617
Ateşşahin et al.	2010	1403617
Ateşşahin et al.	2010	1403617
Ateşşahin et al.	2010	1403617
Kato et al.	2010	1403766
Kato et al.	2010	1403766
Aulerich et al.	1973	1404635
Aulerich et al.	1973	1404635
Aulerich et al.	1973	1404635
Aulerich et al.	1973	1404635
Kimbrough et al.	1973	1404636
Kimbrough et al.	1973	1404636
Innami et al.	1974	1404661
Innami et al.	1974	1404661
Innami et al.	1974	1404661
Burse et al.	1974	1404880
Allen et al.	1975	1405015
Allen et al.	1975	1405015
Allen et al.	1975	1405015
Allen et al.	1975	1405015
Allen et al.	1975	1405015
Allen et al.	1975	1405015
Bastomsky et al.	1975	1405019
Bastomsky et al.	1975	1405019
Carlson	1975	1405053
Carlson	1975	1405053

histopathologyliver weightserum biochemistry
histopathologyliver weightserum biochemistry
histopathologyliver weightserum biochemistry

testes histopathology

testis, epididymis, seminal vesicle and ventral prostate weight

testosterone levels

sperm abnormalities, epididymal sperm concentration, sperm motility

T4-UDPGT activityliver weight

T4-UDPGT activityliver weight

gestation length

litter size, pregnancy rate

histopathologyliver weight

histopathologyliver weight

enlarged hepatocytes, vacuolated or foamy cytoplasm, cytoplasmic inclusions, adenofibrosis, brown pigment in the Kupff

enlarged hepatocytes, vacuolated or foamy cytoplasm, cytoplasmic inclusions, adenofibrosis, brown pigment in the Kupff

phospholipid levels in the liverliver weight (absolute and relative)vitamin A levels in the liver

phospholipid levels in the liverliver weight (absolute and relative)vitamin A levels in the liver

phospholipid levels in the liverliver weight (absolute and relative)vitamin A levels in the liver

microscopic lesions in liver

brain histopathology

testes histopathology

cholesterolhepatic microsomal enzymes (glucose-6-phosphatase, N-demethylase, aniline hydroxylase, nitroreductase, glu

cholesterolhepatic microsomal enzymes (glucose-6-phosphatase, N-demethylase, aniline hydroxylase, nitroreductase, glu

cholesterolhepatic microsomal enzymes (glucose-6-phosphatase, N-demethylase, aniline hydroxylase, nitroreductase, glu

cholesterolhepatic microsomal enzymes (glucose-6-phosphatase, N-demethylase, aniline hydroxylase, nitroreductase, glu

cholesterolhepatic microsomal enzymes (glucose-6-phosphatase, N-demethylase, aniline hydroxylase, nitroreductase, glu

UDP-glucuronyltransferase activityliver weight

UDP-glucuronyltransferase activityliver weight

liver microsomal cytochrome c reductase activity and cytochrome P-450 contentliver weight, liver to body weight ratio

liver microsomal cytochrome c reductase activity and cytochrome P-450 contentliver weight, liver to body weight ratio

Liver Histopathology	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Serum Biomarkers of Liver Health & Function	Hepatobiliary

Reproductive organ histopathology, male	Reproductive
Reproductive organ size/weight, male	Reproductive

Sex hormone levels, male	Reproductive
Sperm/semen parameters	Reproductive

Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Gestation length and preterm birth	Reproductive
Pregnancy/conception rate	Reproductive
Liver Histopathology	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Micronutrients	Hepatobiliary
Liver Histopathology	Hepatobiliary

Brain-histological, structural, morphological	Nervous System
Reproductive organ histopathology, male	Reproductive
Cholesterol	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Kanechlor 500

Kanechlor 500

Mixture: Aroclors 1242, 1248, 1254

Mixture: Aroclors 1242, 1248, 1254

Aroclor 1254Mixture: Aroclors 1242, 1248, 1254

Aroclor 1254Mixture: Aroclors 1242, 1248, 1254

Aroclor 1254

Aroclor 1254

PCBs

PCBs

PCBs

Aroclor 1016Aroclor 1242

Aroclor 1248

Aroclor 1248

Aroclor 1248

Aroclor 1248

Aroclor 1248

Aroclor 1248

Aroclor 1248

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Rat	Oral-gavage
Rat	Oral-gavage
Rat	Oral-gavage

Rat	Injection-ip
Rat	Injection-ip

Rat	Injection-ip
Rat	Injection-ip
Mouse	
Rat	Injection-ip
Mouse	
Rat	Injection-ip
Mink	Oral-diet
Mink	Oral-diet
Mink	Oral-diet
Mink	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet

Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Injection-ip
Rat	Injection-ip
Rat	Injection-ip
Rat	Injection-ip

56

56

56

Primary

Primary

56

56

56

Adult male rats were dosed with 2 mg/kg-day i.p. for 8 weeks. LOAEL is based on incidence of pathological lesions in testis at the end of 8 weeks (Table 4).

Adult male rats were dosed with 2 mg/kg-day i.p. for 8 weeks. LOAEL is based on significant increase in relative testis, epididymis, and seminal vesicle weight at the end of 8 weeks (Table 1). Absolute weights were not significantly changed so this is likely an artifact of decreased body weight.

Adult male rats were dosed with 2 mg/kg-day i.p. for 8 weeks. Testosterone decreased in PCB-treated rats at the end of 8 weeks, but not significantly (Table 3).

Adult male rats were dosed with 2 mg/kg-day i.p. for 8 weeks. LOAEL is based on significant decrease in epididymal sperm concentration and increase in abnormal sperm at the end of 8 weeks (Table 2).

Adult male rats were fed a diet containing 100 ppm Aroclor 1248 for 4 wk. No PCB related effects on brain histopathology reported.

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

CHECK	0.9	CHECK	CHECK	CHECK	
CHECK	0.9	CHECK	CHECK	CHECK	
52	0.9	0.312	0.066	5	56
52	0.9	0.312	0.066	5	56
52	0.9	0.312	0.066	5	56
52	0.9	0.312	0.066	5	56
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

This image shows a full page of a document template. It consists of a series of horizontal grey lines spaced evenly apart, providing a guide for writing. The lines are thin and light grey, set against a plain white background. There are no margins, text, or other markings present on the page.

Carlson	1975	1405053
Innami et al.	1975	1405067
Innami et al.	1975	1405067
Zinkl	1977	1405339
Zinkl	1977	1405339
Zinkl	1977	1405339
Zinkl	1977	1405339
Zinkl	1977	1405339
Kasza et al.	1978	1405547
Kasza et al.	1978	1405547
Kasza et al.	1978	1405547
Oishi et al.	1978	1405559
Oishi et al.	1978	1405559
Oishi et al.	1978	1405559
Oishi et al.	1978	1405559
Oishi et al.	1978	1405559
Oishi et al.	1978	1405559
Oishi et al.	1978	1405559
Chakraborty et al.	1978	1405560
Chakraborty et al.	1978	1405560
Chakraborty et al.	1978	1405560
Chakraborty et al.	1978	1405560
Hinton et al.	1978	1405660
Hinton et al.	1978	1405660
Hinton et al.	1978	1405660
Hinton et al.	1978	1405660
Narbonne	1979	1405902
Narbonne	1979	1405902
Narbonne	1979	1405902
Narbonne	1979	1405972
Chow et al.	1979	1406063
Oishi and Hiraga	1980	1406102
Tani et al.	1980	1406111
Tani et al.	1980	1406111

liver microsomal cytochrome c reductase activity and cytochrome P-450 content
liver weight, liver to body weight ratio
liver weight, relative liver weight
liver retinoids
liver weight, relative liver weight
liver retinoids

brain histopathology

cholesterol
liver lesions, histopathology
liver weight
serum activities of glutamic-oxaloacetic transaminase (S-GOT), glutamic
cholesterol
liver lesions, histopathology
liver weight
serum activities of glutamic-oxaloacetic transaminase (S-GOT), glutamic
cholesterol
liver lesions, histopathology
liver weight
serum activities of glutamic-oxaloacetic transaminase (S-GOT), glutamic
liver histopathology (fatty degeneration, mononuclear infiltration, cytoplasmic inclusions), electron microscopy (hypertro
liver histopathology (fatty degeneration, mononuclear infiltration, cytoplasmic inclusions), electron microscopy (hypertro
liver histopathology (fatty degeneration, mononuclear infiltration, cytoplasmic inclusions), electron microscopy (hypertro

absolute and relative brain weight, gross pathology of brain

testes, seminal vesicles, and prostate weights
testicular testosterone levels

testes, seminal vesicles, and prostate weights
testicular testosterone levels

cholesterol
total liver lipid
liver weight
clinical chemistry
cholesterol
total liver lipid
liver weight
clinical chemistry
cholesterol
total liver lipid
liver weight
clinical chemistry
cholesterol
total liver lipid
liver weight
clinical chemistry
liver histopathology
liver total lipid, phospholipid, neutral lipid, and components of neutral lipid (monoglycerides, sterols,
liver histopathology
liver total lipid, phospholipid, neutral lipid, and components of neutral lipid (monoglycerides, sterols,
liver histopathology
liver total lipid, phospholipid, neutral lipid, and components of neutral lipid (monoglycerides, sterols,
liver histopathology
liver total lipid, phospholipid, neutral lipid, and components of neutral lipid (monoglycerides, sterols,
cholesterol
cytochrome P-450, NADPH cytochrome c reductase, ethylmorphine demethylase, inosine diphosphatase (IDP-
cholesterol
cytochrome P-450, NADPH cytochrome c reductase, ethylmorphine demethylase, inosine diphosphatase (IDP-
cholesterol
cytochrome P-450, NADPH cytochrome c reductase, ethylmorphine demethylase, inosine diphosphatase (IDP-
cholesterol
cytochrome P-450, NADPH cytochrome c reductase, ethylmorphine demethylase, inosine diphosphatase (IDP-
cholesterol
cytochrome P-450, NADPH cytochrome c reductase, ethylmorphine demethylase, inosine diphosphatase (IDP-
microsomal liver protein, liver microsomal fractions
liver fat
absolute and relative liver weights
microsomal liver protein, liver microsomal fractions
liver fat
absolute and relative liver weights
microsomal liver protein, liver microsomal fractions
liver fat
absolute and relative liver weights
liver aminopyrine-N-demethylase activity, aniline hydroxylase activity, cytochrome P-450 and cytochrome b-5 concentra
vitamin C and E
liver weight
liver cholesterol, plasma cholesterol
aminopyrine demethylase
liver total lipid
liver weight
liver ascorbic acid
liver cholesterol, plasma cholesterol
aminopyrine demethylase
liver total lipid
liver weight
liver ascorbic acid

Serum Biomarkers of Liver Health & Function	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Micronutrients	Hepatobiliary

Brain-histological, structural, morphological	Nervous System
Cholesterol	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Serum Biomarkers of Liver Health & Function	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary

Brain-histological, structural, morphological	Nervous System
Reproductive organ size/weight, male	Reproductive

Sex hormone levels, male	Reproductive
Cholesterol	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Serum Biomarkers of Liver Health & Function	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Micronutrients	Hepatobiliary
Cholesterol	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Micronutrients	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Cholesterol	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary

Aroclor 1254

PCBs

PCBs

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Kanechlor 500

Kanechlor 500

Kanechlor 500

Kanechlor 500

Kanechlor 500

Kanechlor 500

Kanechlor 500

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Phenochlor DP6

Phenochlor DP6

Phenochlor DP6

Phenochlor DP6

Aroclor 1254

Kanechlor 500

Aroclor 1248

Aroclor 1248

Rat	Injection-ip
Rat	Oral-diet
Rat	Oral-diet

Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet

Rat	Oral-diet
Rat	Oral-diet

Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-gavage
Rat	Oral-gavage
Rat	Oral-gavage
Rat	Oral-gavage
Rat	Injection-ip
Rat	Injection-ip
Rat	Injection-ip
Rat	Injection-ip
Rat	Injection-ip
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	CHECK
Mouse	Oral-gavage
Rat	Oral-diet
Rat	Oral-diet

Primary

Primary

NR (100-130 g male)

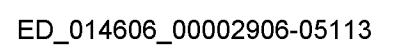
Primary

Primary

28

28

28



N/A

N/A

10.2

Female random bred albino rats (175 g) exposed for up to 20 wk. "Macroscopic lesions were confined to the liver and the skin."

Male rats fed diet containing 100 ppm PCBs; authors estimated dose to be 10.2 mg/kg-d. Increased absolute and relative brain weight (Table 2). "Cerebral edema was observed in all treatment groups and the brain appeared to be slightly flabby."

Tani et al.	1980	1406111
Tani et al.	1980	1406111
Tani et al.	1980	1406111
Aly et al.	2009	1406313
Aly et al.	2009	1406313
Watanabe and Sugahara	1981	1406415
Watanabe and Sugahara	1981	1406415
Chow et al.	1981	1406418
Chow et al.	1981	1406418
Chow and Gairola	1981	1406420
Chow and Gairola	1981	1406420
Jonsson et al.	1981	1406435
Deml and Oesterle	1982	1406669
Deml and Oesterle	1982	1406669
Deml and Oesterle	1982	1406669
Kluwe et al.	1982	1406671
Kluwe et al.	1982	1406671
Kluwe et al.	1982	1406671
Kluwe et al.	1982	1406671
Kluwe et al.	1982	1406671
Hori et al.	1982	1406694
Saito et al.	1982	1406695
Saito et al.	1982	1406695
Saito et al.	1982	1406695
Saito et al.	1982	1406695
Oesterle and Deml	1983	1407028
Oesterle and Deml	1983	1407028
Saito et al.	1983	1407180
Saito et al.	1983	1407180
Elumalai et al.	2009	1407232
Elumalai et al.	2009	1407232
Carter and Mercer	1983	1407352
Oesterle and Deml	1984	1407494
Oesterle and Deml	1984	1407494
Nesković et al.	1984	1407759

liver cholesterol, plasma cholesterolaminopyrine demethylaseliver total lipidsliver weightliver ascorbic acid
liver cholesterol, plasma cholesterolaminopyrine demethylaseliver total lipidsliver weightliver ascorbic acid
liver cholesterol, plasma cholesterolaminopyrine demethylaseliver total lipidsliver weightliver ascorbic acid

absolute testes and epididymis weight

sperm count, motility, and production, sperm abnormalities

weight gain

pregnancy rate

weight gain

pregnancy rate

liver weightvitamin C

liver weightvitamin C

hepatic enzymes, aryl hydrocarbon hydroxylase (AHH) activity, hepatic levels of thiobarbituric acid reactants (TBAR), redu

hepatic enzymes, aryl hydrocarbon hydroxylase (AHH) activity, hepatic levels of thiobarbituric acid reactants (TBAR), redu

gross liver pathology, liver histopathology (light and electro microscopic examination)

mitotic index in liverevaluation of hepatocyte sizeliver weight

mitotic index in liverevaluation of hepatocyte sizeliver weight

mitotic index in liverevaluation of hepatocyte sizeliver weight

adverse liver morphologyhepatic lipidsliver weightporphyrin depositsGPT activity

adverse liver morphologyhepatic lipidsliver weightporphyrin depositsGPT activity

adverse liver morphologyhepatic lipidsliver weightporphyrin depositsGPT activity

adverse liver morphologyhepatic lipidsliver weightporphyrin depositsGPT activity

adverse liver morphologyhepatic lipidsliver weightporphyrin depositsGPT activity

liver histopathology (hepatocyte enlargement, infiltration with inflammatory cells, proliferation of epithelial cells of bile

glutathione peroxidaselipids; lipid peroxideliver weightvitamins E and A

glutathione peroxidaselipids; lipid peroxideliver weightvitamins E and A

glutathione peroxidaselipids; lipid peroxideliver weightvitamins E and A

glutathione peroxidaselipids; lipid peroxideliver weightvitamins E and A

histologyliver weight

histologyliver weight

liver microsomal enzyme activityliver weight

liver microsomal enzyme activityliver weight

testes weight

serum testosterone

relative wet liver weight

histologyliver weight

histologyliver weight

liver enzymes (NADPH-cytochrome c reductase activity and cytochrome P-450 content)liver weightserum enzymes

Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Micronutrients	Hepatobiliary
Reproductive organ size/weight, male	Reproductive

Sperm/semen parameters	Reproductive
Maternal weight gain	Reproductive

Pregnancy/conception rate	Reproductive
Liver Weight/Hepatomegaly	Hepatobiliary
Micronutrients	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Serum Biomarkers of Liver Health & Function	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Cell Proliferation	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Porphyrins	Hepatobiliary
Serum Biomarkers of Liver Health & Function	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Micronutrients	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Reproductive organ size/weight, male	Reproductive

Sex hormone levels, male	Reproductive
Liver Weight/Hepatomegaly	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary

Aroclor 1248

Aroclor 1248

Aroclor 1248

Aroclor 1254

Aroclor 1254

Kanechlor 500

Kanechlor 500

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1242

Clophen A50

Clophen A50

Clophen A50

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Kanechlor 400

PCBs

PCBs

PCBs

PCBs

Clophen A50

Clophen A50

PCBs

PCBs

Aroclor 1254

Aroclor 1254

Aroclor 1254

Clophen A50

Clophen A50

Aroclor 1242

Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Injection-ip
Rat	Injection-ip
Mouse	Injection-sc
Mouse	Injection-sc
Rat	CHECK
Rat	CHECK
Rat	Injection-ip
Rat	Injection-ip
Rat	Oral-diet
Rat	Oral-gavage
Rat	Oral-gavage
Rat	Oral-gavage
Rat	Oral-CHECK
Rat	Oral-CHECK
Rat	Oral-CHECK
Rat	Oral-CHECK
Rat	Oral-CHECK
Cynomolgus monkey	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-gavage
Rat	Oral-gavage
Rat	Oral-diet
Rat	Oral-diet
Rat	Injection-ip
Rat	Injection-ip
Rat	Oral-diet
Rat	Oral-gavage
Rat	Oral-gavage
Rat	Oral-gavage

Primary

97

Primary

97

Primary

Primary

Primary

Primary

90

20

20

30

[illegible]

Adult male rats (90+7 days old) were injected with 0, 0.75, 1.5 or 3 mg/kg/day i.p. for 20 days. LOAEL based on decreased absolute and relative testis and epididymides weights (Table 1).

Adult male rats (90+7 days old) were injected with 0, 0.75, 1.5 or 3 mg/kg/day i.p. for 20 days. LOAEL based on decreased sperm count, sperm motility, and daily sperm production at necropsy (Table 1).

Adult male rats were injected with 0 or 2 mg/kg-day ip for 30 days. No effect on relative testis weight (Table 1).

Adult male rats were injected with 0 or 2 mg/kg-day ip for 30 days. LOAEL is based on significantly decreased serum testosterone at necropsy (Figure 1).

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
168	0.9	0.199	0.054	1	154
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

[illegible]

Nesković et al.	1984	1407759
Nesković et al.	1984	1407759
Yagi et al.	1985	1407989
Yagi et al.	1985	1407989
Mele et al.	1986	1408333
Mele et al.	1986	1408333
Mele et al.	1986	1408333
Lubet et al.	1986	1408430
Nagaoka et al.	1986	1408484
Nagaoka et al.	1986	1408484
Nagaoka et al.	1986	1408484
Nagaoka et al.	1986	1408484
Oda et al.	1986	1408492
Oda et al.	1986	1408492
Oda et al.	1986	1408492
Oda et al.	1986	1408492
Gans	1986	1408543
Gans	1986	1408543
Linzey	1987	1408824
Linzey	1987	1408824

liver enzymes (NADPH-cytochrome c reductase activity and cytochrome P-450 content)liver weightserum enzymes
liver enzymes (NADPH-cytochrome c reductase activity and cytochrome P-450 content)liver weightserum enzymes
dark-brown pigmentation which was identified histochemically as a ceroidliver weight
dark-brown pigmentation which was identified histochemically as a ceroidliver weight

operant conditioning (fixed-interval schedule of food reinforcement, reinforcement omission procedure)

operant conditioning (fixed-interval schedule of food reinforcement, reinforcement omission procedure)

operant conditioning (fixed-interval schedule of food reinforcement, reinforcement omission procedure)

induction of liver microsome activity

cholesterol levelsliver total lipids, phospholipids, triglyceriderelative liver weight, liver weightascorbic acid

cholesterol levelsliver total lipids, phospholipids, triglyceriderelative liver weight, liver weightascorbic acid

cholesterol levelsliver total lipids, phospholipids, triglyceriderelative liver weight, liver weightascorbic acid

cholesterol levelsliver total lipids, phospholipids, triglyceriderelative liver weight, liver weightascorbic acid

cholesterolliver lipids (total and phospholipids), triglyceridesliver weightliver ascorbic acid

cholesterolliver lipids (total and phospholipids), triglyceridesliver weightliver ascorbic acid

cholesterolliver lipids (total and phospholipids), triglyceridesliver weightliver ascorbic acid

cholesterolliver lipids (total and phospholipids), triglyceridesliver weightliver ascorbic acid

liver histopathology (incidence of liver nodules and scarred livers), histological changes (centrilobular hepatocyte hypertr

liver histopathology (incidence of liver nodules and scarred livers), histological changes (centrilobular hepatocyte hypertr

litter size, offspring mortality (F1)

breeding rate (F0)

Liver Weight/Hepatomegaly	Hepatobiliary
Serum Biomarkers of Liver Health & Function	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Cognitive function	Nervous System

Cognitive function	Nervous System
Cognitive function	Nervous System
Liver Enzyme Induction	Hepatobiliary
Cholesterol	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Micronutrients	Hepatobiliary
Cholesterol	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Micronutrients	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Offspring mortality	Developmental
Sexual behavior	Nervous System

Aroclor 1242

Aroclor 1242

Kanechlor 500

Kanechlor 500

Aroclor 1248

Aroclor 1248

Aroclor 1248

Aroclor 1254

Aroclor 1248

Aroclor 1248

Aroclor 1248

Aroclor 1248

Aroclor 1248

Aroclor 1248

Aroclor 1248

Aroclor 1248

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Rat	Oral-gavage
Rat	Oral-gavage
Mouse	Oral-dietOral-gavage
Mouse	Oral-dietOral-gavage
Rhesus monkey	Oral-diet

Rhesus monkey	Oral-diet
Rhesus monkey	Oral-diet
Mouse	Injection-ip
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Mouse	Oral-diet
Mouse	Oral-diet
Mouse	Oral-diet
Mouse	Oral-diet

[illegible]

no 1

no 1

4

N/A

N/A

0.09 N/A

N/A

0.006 N/A

N/A

10 N/A

N/A

Rhesus monkey dams dosed for 86.4-89.4 wk (Table 1 in HERO #199846; assume 605 d). Dosing stopped after dam nursed offspring for 3 mo. Lactation duration 4 mo (122 d). Dose is reported as 2.5 ppm with precise exposure estimates provided in Table 1 in HERO #199846 (mean dose = 0.627 mg/kg-wk (0.09 mg/kg-d)). No effects of exposure on cognitive test performance were reported.

Rhesus monkey dams dosed for 71.9-89.4 wk (Table 2 in HERO #199846; assume 503 d; corresponding "weeks off PCB diet" is 84.1 (589 d)). Lactation duration 4 mo (122 d). Dose is reported as 2.5 ppm with precise exposure estimates provided in Table 2 in HERO #199846 (mean dose = 0.664 mg/kg-wk (0.09 mg/kg-d)). Cognitive test performance was altered at ~40 mo of age.

Rhesus monkey dams dosed for 66-83 wk (Table 3 in HERO #199846; assume 462 d). Lactation duration 4 mo (122 d). Dose is reported as 0.5 ppm with precise exposure estimates provided in Table 3 in HERO #199846 (mean dose = 0.044 mg/kg-wk (0.006 mg/kg-d)). Cognitive test performance was altered at ~40 mo of age.

Continuous dosing for 9-15 months beginning at 12 weeks of age (mice); timing of pregnancies within this period is unclear; assume mating on the first day of exposure, litter size measured at birth
Average litter size of 4 pups estimated from data presented in Table 3

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
168	0.9	0.199	0.054	1	154

168	0.9	0.199	0.054	1	154
168	0.9	0.199	0.054	1	154
18	0.9	0.229	0.264	6	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21

[illegible]

Linzey	1987	1408824
Linzey	1987	1408824
Oda et al.	1987	1408825
Oda et al.	1987	1408825
Oda et al.	1987	1408825
Oda et al.	1987	1408825
Oda et al.	1987	1408825
Oda et al.	1987	1408825
Poul	1987	1408870
Poul	1987	1408870
Poul	1987	1408870
Johansson	1987	1408912
Johansson	1987	1408912
Linzey	1988	1409002
Linzey	1988	1409002
Linzey	1988	1409002

birth interval (F0)

litter size, litters/breeding female (F0)

cholesterolmicrosomes (cytochrome P-450, cytochrome b5, and protein)histopathology (hepatocyte hypertrophy and acc

cholesterolmicrosomes (cytochrome P-450, cytochrome b5, and protein)histopathology (hepatocyte hypertrophy and acc

cholesterolmicrosomes (cytochrome P-450, cytochrome b5, and protein)histopathology (hepatocyte hypertrophy and acc

cholesterolmicrosomes (cytochrome P-450, cytochrome b5, and protein)histopathology (hepatocyte hypertrophy and acc

cholesterolmicrosomes (cytochrome P-450, cytochrome b5, and protein)histopathology (hepatocyte hypertrophy and acc

cholesterolmicrosomes (cytochrome P-450, cytochrome b5, and protein)histopathology (hepatocyte hypertrophy and acc

liver microsomal enzyme activitiesliver lipidsliver weight

liver microsomal enzyme activitiesliver lipidsliver weight

liver microsomal enzyme activitiesliver lipidsliver weight

relative testis weight

plasma testosterone

relative testis weight

plasma testosterone

litter size, litter number, offspring mortality (F2)

offspring weight, weight gain, growth rate patterns (F1)

birth interval (F1)

Time-to-pregnancy and couple fertility	Reproductive
--	--------------

Pregnancy/conception rate	Reproductive
Cholesterol	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Micronutrients	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary

Reproductive organ size/weight, male	Reproductive
Sex hormone levels, male	Reproductive

Offspring mortality	Developmental
Weight and size (early life)	Developmental

Time-to-pregnancy and couple fertility	Reproductive
--	--------------

Aroclor 1254

Aroclor 1254

Aroclor 1248

Aroclor 1248

Aroclor 1248

Aroclor 1248

Aroclor 1248

Aroclor 1248

Phenochlor DP5

Phenochlor DP5

Phenochlor DP5

Clophen A50

Clophen A50

Aroclor 1254

Aroclor 1254

Aroclor 1254

Mouse	Oral-diet
-------	-----------

Mouse	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet

Mouse	Oral-gavage
Mouse	Oral-gavage

Mouse	Oral-diet
Mouse	Oral-diet

Mouse	Oral-diet
-------	-----------

Primary

84

Primary

84

Primary

35

Primary

35

Secondary

Secondary

Secondary

274

4

35-49

35-49

4

4

4

N/A

10

N/A

10

N/A

10 N/A

N/A

10 N/A

N/A

10

10

Mouse breeding pairs (12 weeks old) were exposed to 10 ppm in diet; duration of exposure ranged from 9-15 months for various breeding pairs. I used 9 months for the duration of exposure. LOAEL based on significantly increased birth interval (Table 3).

Continuous dosing for 9-15 months beginning at 12 weeks of age (mice); timing of pregnancies within this period is unclear; assume mating on the first day of exposure, litter size as a reproductive effect reflects conception and implantation and is influenced only by pre-implantation exposure (GD4 in mice)

0, 8, 40, 80, 120, 160 mg/kg-day (dosed every 2-3 days)

0, 8, 40, 80, 120, 160 mg/kg-day (dosed every 2-3 days)

Continuous dosing of the F0 generation beginning at 12 weeks of age (mice); timing of F1 pregnancies relative to exposure initiation is unclear; assume F0 mating on the first day of exposure; F1 mating at 12 weeks of age; offspring survival evaluated through PND28

Average litter size of 4 pups estimated from data presented in text

Continuous dosing for 9-15 months beginning at 12 weeks of age (mice); timing of pregnancies within this period is unclear; assume mating on the first day of exposure, pup weight altered at 4 weeks of age

Average litter size of 4 pups estimated from data presented in Table 3 (HERO #1408824)

The F0 generation was dosed continuously for 18 months; these were wild-caught mice of unknown age; timing of pregnancies within this period is unclear; assume mating on the first day of exposure; F1 generation was mated beginning at 12 weeks of age and continuing for 8-13 months

Average litter size for the LOAEL dose group was 4 (Table 2; HERO #1408824)

	18	0.9	0.229	0.264	6	21

	18	0.9	0.229	0.264	6	21
	22	0.9	0.094	0.154	10	21
	22	0.9	0.094	0.154	10	21
	22	0.9	0.094	0.154	10	21
	22	0.9	0.094	0.154	10	21
	22	0.9	0.094	0.154	10	21
	22	0.9	0.094	0.154	10	21
	22	0.9	0.094	0.154	10	21
	22	0.9	0.094	0.154	10	21
	22	0.9	0.094	0.154	10	21

	18	0.9	0.229	0.264	6	21
	18	0.9	0.229	0.264	6	21

	18	0.9	0.229	0.264	6	21
	18	0.9	0.229	0.264	6	21

	18	0.9	0.229	0.264	6	21
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Linzey	1988	1409002
Linzey	1988	1409002
Linzey	1988	1409002
Rao	1990	1409909
Rao	1990	1409909
Oda et al.	1990	1410008
Oda et al.	1990	1410008
Oda et al.	1990	1410008
Oda et al.	1990	1410008
Nagaoka et al.	1990	1410073
Nagaoka et al.	1990	1410073
Steinberg et al.	2008	1410076
Steinberg et al.	2008	1410076
Steinberg et al.	2008	1410076

number of young/litter, number of litters/breeding female, pregnancy rate (F1)

uterine and ovarian weights (F1)

testis and male accessory gland weights (F1)

liver histopathology (centrilobular hypertrophy, hepatocellular damage, hyperplasia, karyolysis, and karyorrhexis)liver su

liver histopathology (centrilobular hypertrophy, hepatocellular damage, hyperplasia, karyolysis, and karyorrhexis)liver su

total and free cholesterolmorphological changeslipoproteins, triglyceride, phospholipidliver weight

total and free cholesterolmorphological changeslipoproteins, triglyceride, phospholipidliver weight

total and free cholesterolmorphological changeslipoproteins, triglyceride, phospholipidliver weight

total and free cholesterolmorphological changeslipoproteins, triglyceride, phospholipidliver weight

cholesterolliver total lipids, phospholipids, triacylglycerol

cholesterolliver total lipids, phospholipids, triacylglycerol

estrous cyclicity

litter size

ovarian weights, uterine weights

progesterone, estradiol, LH

estrous cyclicity

litter size

ovarian weights, uterine weights

progesterone, estradiol, LH

estrous cyclicity

litter size

ovarian weights, uterine weights

progesterone, estradiol, LH

Pregnancy/conception rate	Reproductive
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Reproductive organ size/weight, female	Reproductive
Reproductive organ size/weight, male	Reproductive
Liver Histopathology	Hepatobiliary
Serum Biomarkers of Liver Health & Function	Hepatobiliary
Cholesterol	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Cholesterol	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary

Estrous/menstrual cycle characteristics	Reproductive
Pregnancy/conception rate	Reproductive

Reproductive organ size/weight, female	Reproductive
--	--------------

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1260

Aroclor 1260

Aroclor 1248

Aroclor 1248

Aroclor 1248

Aroclor 1248

Aroclor 1248

Aroclor 1248

Aroclor 1221

Aroclor 1221

Aroclor 1221

Mouse	Oral-diet
-------	-----------

Mouse	Oral-diet
Mouse	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet

Rat	Injection-ip
Rat	Injection-ip

Rat	Injection-ip
-----	--------------

Secondary

Secondary

Secondary

Primary

Primary

Primary

[illegible]

The F0 generation was dosed continuously for 18 months; these were wild-caught mice of unknown age; timing of pregnancies within this period is unclear; assume mating on the first day of exposure; F1 generation was mated beginning at 12 weeks of age and continuing for 8-13 months
Average litter size for the LOAEL dose group was 4 (Table 2; HERO #1408824)

Continuous dosing for 9-15 months beginning at 12 weeks of age (mice); timing of pregnancies within this period is unclear; assume mating on the first day of exposure, ovarian and uterine weights altered at 8 weeks of age
Average litter size for the LOAEL dose group was 3.6 (Table 3; HERO #1408824)

Continuous dosing for 9-15 months beginning at 12 weeks of age (mice); timing of pregnancies within this period is unclear; assume mating on the first day of exposure, male accessory gland weights altered at 8 weeks of age
Average litter size for the LOAEL dose group was 3.6 (Table 3; HERO #1408824)

Dosed on GD16 and 180, 0.1, 1, or 10 mg/kg-day

Dosed on GD16 and 180, 0.1, 1, or 10 mg/kg-day

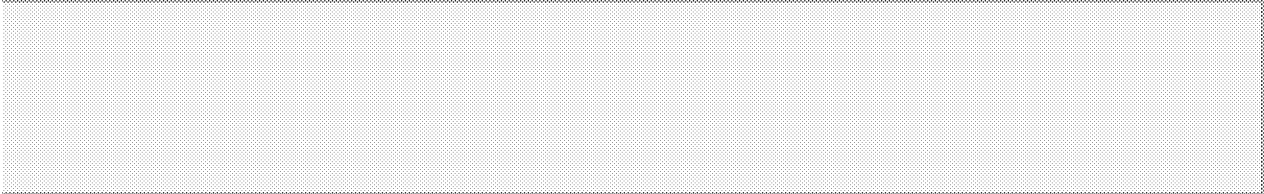
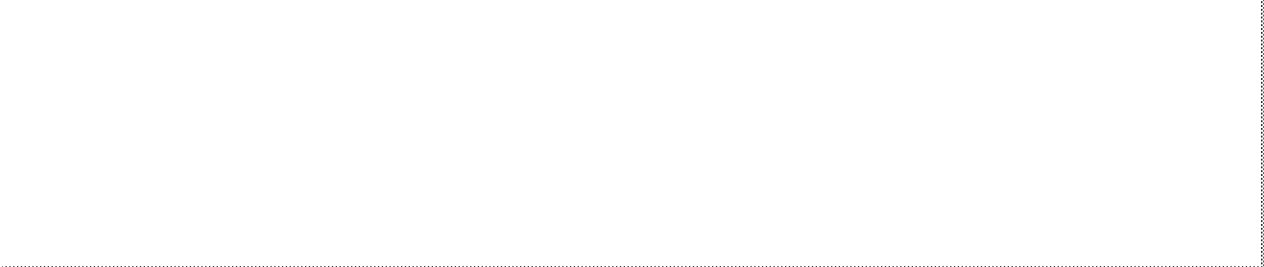
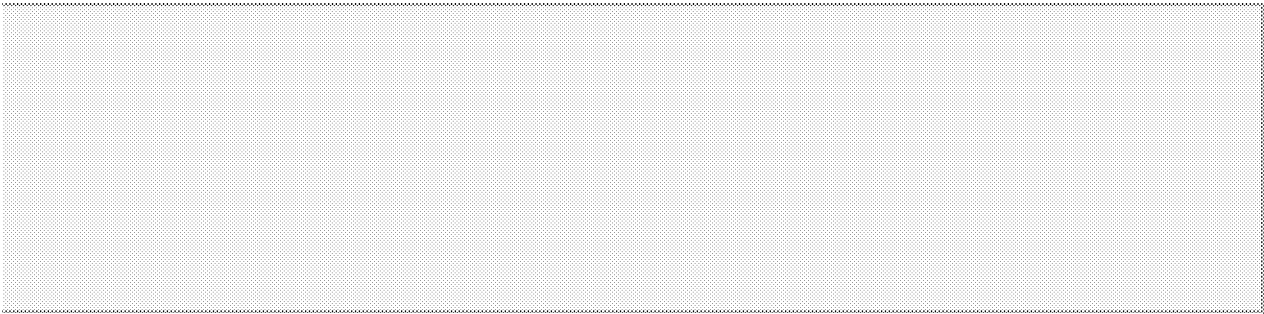
Dosed on GD16 and 180, 0.1, 1, or 10 mg/kg-day

18	0.9	0.229	0.264	6	21

18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
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Steinberg et al.	2008	1410076
Jenke et al.	1991	1410489
Jenke et al.	1991	1410489
Jenke et al.	1991	1410489
Poul	1991	1410599
Poul	1991	1410599
Poul	1991	1410599
Poul	1992	1410770
Poul	1992	1410770
Poul	1992	1410770
Sugawara et al.	2008	1410853
Sugawara et al.	2008	1410853
Sugawara et al.	2008	1410853
Sugawara et al.	2008	1410853
Sugawara et al.	2008	1410853
Sugawara et al.	2008	1410853
Sugawara et al.	2008	1410853
Sugawara et al.	2008	1410853
Sugawara et al.	2008	1410853
Sugawara et al.	2008	1410853
Sugawara et al.	2008	1410853
Sugawara et al.	2008	1410853
Sugawara et al.	2008	1410853
Simmons and Mckee	1992	1411046
Simmons and Mckee	1992	1411046

estrous cyclicity

litter size

ovarian weights, uterine weights

progesterone, estradiol, LH

DNA synthesis in liver

DNA synthesis in liver

DNA synthesis in liver

cholesterol liver lipids liver weight

cholesterol liver lipids liver weight

cholesterol liver lipids liver weight

liver microsomal enzyme activities liver lipids liver weight

liver microsomal enzyme activities liver lipids liver weight

liver microsomal enzyme activities liver lipids liver weight

physical features observed before weaning: pinna detachment, hair growth, eye opening

litter size, number of surviving male offspring on PND 1

number of surviving male offspring on PND 1

pup weight

incisor eruption

spontaneous locomotion activity, open-field test

grasp reflex, righting reflex, walking, negative geotaxis, cliff avoidance, swimming speed

brain histopathology

water maze test

open-field test

gestational weight gain

adrenal weight

EROD activity, PROD activity, pentobarbital sleep time

Sex hormone levels, female	Reproductive
Liver Cell Proliferation	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Cholesterol	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Developmental milestones	Developmental
Offspring mortality	Developmental
Sex ratio	Developmental
Weight and size (early life)	Developmental
Dental effects	Musculoskeletal
Activity level	Nervous System
Motor function	Nervous System
Brain-histological, structural, morphological	Nervous System
Cognitive function	Nervous System
Emotional state/affective behavior	Nervous System
Maternal weight gain	Reproductive
Adrenal weight	Endocrine
Liver enzyme induction	Hepatobiliary

Aroclor 1221

Clophen A50

Clophen A50

Clophen A50

Phenochlor DP5

Phenochlor DP5

Phenochlor DP5

Phenochlor DP5

Phenochlor DP5

Phenochlor DP5

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Rat	Injection-ip
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-gavage
Rat	Oral-gavage
Rat	Oral-gavage
Rat	Oral-gavage
Rat	Oral-gavage
Mouse	Oral-gavage
Mouse	Oral-gavage
Mouse	Oral-gavage
Mouse	Oral-gavage
Mouse	Oral-gavage
Mouse	Oral-gavage
Mouse	Oral-gavage
Mouse	Oral-gavage
Mouse	Oral-gavage
Mouse	Oral-gavage
Mouse	Oral-gavage
Mouse	Oral-diet
Mouse	Oral-diet

Primary

Secondary

Secondary

Secondary

Secondary

Secondary

Secondary

Secondary

Secondary

Secondary

Secondary

Primary

Primary

105

Primary

105

2

8

8

no

8

21

21

[illegible]

N/A	6	N/A	
			N/A
			N/A
N/A	6	N/A	
			N/A
			N/A
			N/A
N/A	6	N/A	
			N/A
			N/A
N/A	2.5		

Dosed on GD16 and 180, 0.1, 1, or 10 mg/kg-day

Mouse dams dosed by gavage every 3 days (18 mg/kg) from GD5-PND20; eye opening affected by PND12
Average litter size of 8 pups estimated from data presented in Table 1

Mouse dams dosed by gavage every 3 days (18 mg/kg) from GD5-PND20; pup weight affected by 6 weeks of age
Average litter size of 8 pups estimated from data presented in Table 1

Mouse dams dosed by gavage every 3 days (18 mg/kg) from GD5-PND20; open field behavior (defecation, urination, latency) affected after 8 weeks of age
Average litter size of 8 pups estimated from data presented in Table 1

Dosing for 21 days beginning at 90-120 days of age

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21

Not reported (interpreted as Deficient)	Adequate	Good
Not reported (interpreted as Deficient)	Adequate	Good
Not reported (interpreted as Deficient)	Adequate	Good
Not reported (interpreted as Deficient)	Adequate	Good
Not reported (interpreted as Deficient)	Adequate	Good
Not reported (interpreted as Deficient)	Adequate	Good
Not reported (interpreted as Deficient)	Adequate	Good
Not reported (interpreted as Deficient)	Adequate	Good
Not reported (interpreted as Deficient)	Adequate	Good
Not reported (interpreted as Deficient)	Adequate	Good
Not reported (interpreted as Deficient)	Adequate	Good

liver weight
spleen weight
testes weight
kidney weight
P450 isoenzymes (cytochrome P450, cytochrome b5, microsomal protein concentrations, ethoxyresorufin-0-deethylase (t
P450 isoenzymes (cytochrome P450, cytochrome b5, microsomal protein concentrations, ethoxyresorufin-0-deethylase (t
serum and liver cholesterol
liver microsomes
liver weight
serum and liver cholesterol
liver microsomes
liver weight
serum and liver cholesterol
liver microsomes
liver weight
serum and liver cholesterol
liver microsomes
liver weight

neurotransmitter levels

neurotransmitter levels

neurotransmitter levels

neurotransmitter levels

neurotransmitter levels

neurotransmitter levels

uterine weight

EROD and PROD activity
liver weight (% body)

Liver Weight/Hepatomegaly	Hepatobiliary
Immune organ weight	Immune System
Reproductive organ size/weight, male	Reproductive
Kidney weight	Urinary System
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Cholesterol	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Micronutrients	Hepatobiliary
Neurotransmitter levels	Nervous System

Neurotransmitter levels	Nervous System
Neurotransmitter levels	Nervous System

Neurotransmitter levels	Nervous System
Neurotransmitter levels	Nervous System

Neurotransmitter levels	Nervous System
Reproductive organ size/weight, female	Reproductive
Liver Enzyme Induction	Hepatobiliary

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

PCBs

PCBs

PCBs

PCBs

PCBs

Aroclor 1016

Aroclor 1260

Aroclor 1254

Aroclor 1016

Aroclor 1016

Aroclor 1016

Aroclor 1242

Aroclor 1242

Primary	105
Primary	105
Primary	105
Primary	105

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Primary	NR (4-6kg male)
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Primary	NR (4-6kg male)
---------	-----------------

Primary	NR (250-300g male)
---------	--------------------

Secondary	
-----------	--

Secondary	
-----------	--

Secondary	
-----------	--

Primary	
---------	--

21
21
21
21

140

140

30

no

10

no

10

no

10

			3	2.5	100
			3	2.5	100
			3	2.5	100
			3	2.5	100

			2	3.2	3.2
			2	3.2	3.2
			3	500	1000

47	2	3	100	300
47	4	3	100	300

57	2	3	100	300
				

2.5	25		
			N/A
			N/A
			N/A

N/A	3.2	
N/A	3.2	
N/A	500	

N/A	100	N/A
N/A	100	N/A

N/A	100	N/A

Dosing for 21 days beginning at 90-120 days of age

Adult monkeys exposed for 20 or 66 wk. Decreased DA concentrations in the caudate nucleus, substantia nigra and hypothalamus following 20 wk of exposure.

Adult monkeys exposed for 20 or 66 wk. Decreased DA concentrations in the caudate nucleus, substantia nigra and hypothalamus following 20 wk of exposure.

Adult male rats exposed for 30 d. Decreased DA, DOPAC and HVA in the caudate nucleus and decreased DOPAC and HVA in the lateral olfactory tract of male adult rats.

Rat dams exposed GD 8-21, during lactation, or for the combined gestational and lactational periods. Offspring were sacrificed on PND 25, 35 and 60. Litter size NR; use default. Alterations in dopamine in the substantia nigra (days 25 and 60), caudate nucleus (days 25 and 60) in females. In males, alterations in dopamine in the substantia nigra (at 60 days), caudate nucleus (day 60) following gestational (GD8-21) exposure.

Rat dams exposed GD 8-21, during lactation, or for the combined gestational and lactational periods. Offspring were sacrificed on PND 25, 35 and 60. Litter size NR; use default. Alterations in dopamine in the substantia nigra (days 25 and 60), caudate nucleus (days 25 and 60) and NA (day 60) in females. In males, alterations in dopamine in the substantia nigra (at 60 days), caudate nucleus (day 60) and nucleus accumbens (at 35 days) following lactational exposure.

Rat dams exposed GD 8-21, during lactation, or for the combined gestational and lactational periods. Offspring were sacrificed on PND 25, 35 and 60. Litter size NR; use default. Alterations in dopamine in the substantia nigra (days 35 and 60) in females following gestation + lactational exposure.

18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
168	0.9	0.199	0.054	1	154

168	0.9	0.199	0.054	1	154
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

Soontornchat et al.	1994	1411900
Mccoy et al.	1995	1412385
Mccoy et al.	1995	1412385
Mccoy et al.	1995	1412385
Mccoy et al.	1995	1412385
Mccoy et al.	1995	1412385
Vrecl et al.	1995	1412430
Vrecl et al.	1995	1412430
Vrecl et al.	1995	1412430
Smith et al.	1995	1412729
Smith et al.	1995	1412729
Smith et al.	1995	1412729
Smith et al.	1995	1412729
Murugesan et al.	2007	1412740
Voltura and French	2007	1413098

EROD and PROD activityliver weight (% body)

litter size, percentage survival to weaning (F1)

mean birth weight, weaning weight in offspring (F1)

litters born per month, offspring born per month, litter size (F1)

time to first litter, fertile pairs (F1)

litter size

maternal liver histopathologymaternal and fetal relative liver weight, maternal absolute liver volume

maternal liver histopathologymaternal and fetal relative liver weight, maternal absolute liver volume

mitotic rate (polyploidy)histopath of centrilobular hepatocytesliver weights, liver as % body weightheptic uroporphyrinc

mitotic rate (polyploidy)histopath of centrilobular hepatocytesliver weights, liver as % body weightheptic uroporphyrinc

mitotic rate (polyploidy)histopath of centrilobular hepatocytesliver weights, liver as % body weightheptic uroporphyrinc

mitotic rate (polyploidy)histopath of centrilobular hepatocytesliver weights, liver as % body weightheptic uroporphyrinc

serum LH, FSH, testosterone and estradiol

litter size

breeding success

Liver Weight/Hepatomegaly	Hepatobiliary
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Offspring mortality	Developmental
Weight and size (early life)	Developmental

Pregnancy/conception rate	Reproductive
Time-to-pregnancy and couple fertility	Reproductive
Pregnancy/conception rate	Reproductive
Liver Histopathology	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Liver Cell Proliferation	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Porphyryns	Hepatobiliary
Sex hormone levels, male	Reproductive
Pregnancy/conception rate	Reproductive

Aroclor 1242

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Pyralene 3000

Pyralene 3000

Pyralene 3000

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Mixture: Aroclors 1242, 1254

Secondary

Secondary

Secondary

Secondary

Primary

Primary

Primary

	4
	4
	3.8
	3.8
30	
214	

-68	43 N/A	N/A	25
0	18 N/A	N/A	0

0	43	44	433	25
0	43	44	148	25

The F0 generation was dosed continuously for 12 months beginning at 6-10 weeks of age; timing of pregnancies within this period is unclear; assume mating on the first day of exposure; F1 generation was mated "at maturity" and continuing for 12 months; assume "maturity" at 50 days of age; offspring survival altered by PND25
Average litter size of 4 pups estimated from data presented in Table 1

Continuous dosing for 12 months beginning at 6-10 weeks of age (mice); timing of pregnancies within this period is unclear; assume mating on the first day of exposure, pup weight altered at birth
Average litter size of 4 pups estimated from data presented in Table 1

The F0 generation was dosed continuously for 12 months beginning at 6-10 weeks of age; timing of pregnancies within this period is unclear; assume mating on the first day of exposure; F1 generation was mated "at maturity" and continuing for 12 months; assume "maturity" at 50 days of age; offspring and litters born per month were calculated over the entire 12-month mating period
Average litter size for the LOAEL dose group was 3.8 (Table 1)

The F0 generation was dosed continuously for 12 months beginning at 6-10 weeks of age; timing of pregnancies within this period is unclear; assume mating on the first day of exposure; F1 generation was mated "at maturity" and continuing for 12 months; assume "maturity" at 50 days of age; time to first litter was noticeably impacted 80 days after initiation of F1 mating period
Average litter size for the LOAEL dose group was 3.8 (Table 1)

N/A

Yilmaz et al.	2006	1413769
Wu et al.	1999	1414675
Wu et al.	1999	1414675
Chung and Clemens	1999	1414725
Chung and Clemens	1999	1414725
Pruitt et al.	1999	1414981
Aulerich et al.	2000	1415228
Gupta	2000	1415296
Gupta	2000	1415296

serum alkaline phosphatase

liver P450 enzyme induction (EROD, PROD, and BROD)liver weight

liver P450 enzyme induction (EROD, PROD, and BROD)liver weight

female sexual behavior (lordosis quotient, percentages of mount leave and intromission leave); pacing test (approach latency, intromission latency, postejaculatory refractory period)

female sexual behavior (lordosis quotient, percentages of mount leave and intromission leave); pacing test (approach latency, intromission latency, postejaculatory refractory period)

histological/morphological changes in hippocampal mossy fibers

baculum (os-penis) length and mass

litter size

prostate histopathology

prostate weight, epididymis weight, testis weight

litter size

prostate histopathology

prostate weight, epididymis weight, testis weight

Serum Biomarkers of Liver Health & Function	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary

Sexual behavior	Nervous System
Sexual behavior	Nervous System

Brain-histological, structural, morphological	Nervous System
Reproductive organ size/weight, male	Reproductive

Pregnancy/conception rate	Reproductive
Reproductive organ histopathology, male	Reproductive

Aroclor 1221Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1221

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1016

Aroclor 1016

[illegible]

[illegible]

A diagram showing a 2x5 grid of rectangles. The top row has rectangles with widths 82, 2, 2, 14, and 42. The bottom row has rectangles with widths 82, 2, 2, 14, and 42. The rectangles are shaded in a checkerboard pattern.

38	2	3	125	125
		3	2	2

[illegible]

Rat dams dosed from GD 14 to PND 10; pups weaned at PND 28. Authors report injection concentrations of 3.33 and 10 mg/mL and estimate doses of 14 and 42 mg/kg. Sexual behavior evaluated after PND 60. Litter size NR; use default.

Rat dams dosed from GD 14 to PND 10; pups weaned at PND 28. Authors report injection concentrations of 3.33 and 10 mg/mL and estimate doses of 14 and 42 mg/kg. Sexual behavior evaluated after PND 60. Litter size NR; use default.

Dams exposed from mating until pups were weaned at PND 28. Weaned pups were continued on their pre-weaning diets, thus exposure to PCB was from conception to termination at PND 16, 30, or 60 in all PCB groups. Litter size NR; use default. PCB-exposed rats are often underweight, therefore Aroclor 1254 litters were culled to eight pups on PND 3, whereas control litters were left at full size to control for weight differences. Decrease in mossy fiber size at PND 16, 30, and 60.

Gupta	2000	1415296
Blake et al.	2000	1415334
Blake et al.	2000	1415334
Blake et al.	2000	1415334
Blake et al.	2000	1415334
Blake et al.	2000	1415334
Blake et al.	2000	1415334
Blake et al.	2000	1415334
Blake et al.	2000	1415334
Blake et al.	2000	1415334
Blake et al.	2000	1415334
Bryce et al.	2000	1415629
Geller et al.	2001	1415790

litter size

prostate histopathology

prostate weight, epididymis weight, testis weight

heart histopathology

heart weight

adrenal histopathology

adrenal weight

spleen histopathology

spleen weight

estrual smears were taken daily at approximately the same time for 25 days

organs were collected, weighed, fixed, embedded, sectioned, and stained for histological evaluations

organs were collected, weighed, fixed, embedded, sectioned, and stained for histological evaluations

kidney histopathology

kidney weight

menses frequency, duration, and cycle length

operant conditioning

Reproductive organ size/weight, male	Reproductive
Cardiovascular histopathology	Cardiovascular
Heart weight	Cardiovascular
Adrenal histopathology	Endocrine

Adrenal weight	Endocrine
Immune organ histopathology	Immune System
Immune organ weight	Immune System
Estrous/menstrual cycle characteristics	Reproductive

Reproductive organ histopathology, female	Reproductive
Reproductive organ size/weight, female	Reproductive
Kidney histopathology	Urinary System
Kidney weight	Urinary System

Estrous/menstrual cycle characteristics	Reproductive
Cognitive function	Nervous System

Aroclor 1016

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Mouse	Oral-CHECK
Rat	Injection-im
Rat	Injection-im
Rat	Injection-im

Rat	Injection-im
Rat	Injection-im
Rat	Injection-im
Rat	Injection-im

Rat	Injection-im
Rat	Injection-im
Rat	Injection-im
Rat	Injection-im

Rhesus monkey	Oral-capsule
Rat	Oral-gavage

Secondary	
Primary	NR (270-300 g female)
Primary	NR (270-300 g female)
Primary	NR (270-300 g female)

Primary	NR (270-300 g female)
Primary	NR (270-300 g female)
Primary	NR (270-300 g female)
Primary	NR (270-300 g female; assume 120 d)

Primary	NR (270-300 g female; assume 120 d)
Primary	120
Primary	NR (270-300 g female)
Primary	NR (270-300 g female)

Primary	
Secondary	

21

21

21

21

21

21

21

21

21

21

21

no

11.6

16

18

6

43 N/A

N/A

21

		N/A
		N/A
N/A	285	
N/A	285	
		N/A
		N/A
		N/A
		N/A
N/A	285	
		N/A
N/A	285	
		N/A
N/A	1 N/A	

"group 2 animals (n=4) were injected intramuscularly every other day with 0.1cc of Aroclor 1254"; Aroclor 1254 density = 1.54 g/ml; initial rat body weight reported as 270-300 g

"group 2 animals (n=4) were injected intramuscularly every other day with 0.1cc of Aroclor 1254"; Aroclor 1254 density = 1.54 g/ml; initial rat body weight reported as 270-300 g

"group 2 animals (n=4) were injected intramuscularly every other day with 0.1cc of Aroclor 1254"; Aroclor 1254 density = 1.54 g/ml; initial rat body weight reported as 270-300 g
Starting age NR; 270-300 g Sprague-Dawley females; assume 120 d

"group 2 animals (n=4) were injected intramuscularly every other day with 0.1cc of Aroclor 1254"; Aroclor 1254 density = 1.54 g/ml; initial rat body weight reported as 270-300 g

Menstruating female monkeys (avg age 11.5 years at start of study) were dosed with 0, 5, 20, 40, or 80 ug/kg-day. The measurements in this study were taken during the first 3 years of exposure. Results did not support an effect of treatment on menses frequency, duration, and cycle length, as described in text.

Dams exposed GD6-PND21; initiation of lever pressing during autoshaping altered after PND 90
"Litter size ranged from 4 to 17 pups with an overall mean of 11.6 pups per litter"; Litters culled to 8 on PND4

18	0.9	0.229	0.264	6	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

168	0.9	0.199	0.054	1	154
22	0.9	0.094	0.154	10	21

Geller et al.	2001	1415790
Ceccatelli et al.	2006	1415838
Ceccatelli et al.	2006	1415838
Ceccatelli et al.	2006	1415838
Ceccatelli et al.	2006	1415838
Ceccatelli et al.	2006	1415838
Murugesan et al.	2005	1416186
Sharlin et al.	2006	1416310
Sugawara et al.	2006	1416422
Sugawara et al.	2006	1416422
Sugawara et al.	2006	1416422
Sugawara et al.	2006	1416422
Sugawara et al.	2006	1416422
Sugawara et al.	2006	1416422
Sugawara et al.	2006	1416422
Sugawara et al.	2006	1416422

visual thresholds, electroretinography

maternal weight gain

timing of vaginal opening

uterine and ovarian weights

liver weight, relative liver weight

serum LH, testosterone, prolactin, and estradiol

maternal weight gain

pinna detachment, hair growth, day of eye opening

number of pups, offspring survival

body weight

incisor eruption

open-field test, spontaneous locomotion activity

grasp reflex, righting reflex, walking, negative geotaxis, cliff avoidance

Morris water maze test

open-field test

Sensory function	Nervous System
Maternal weight gain	Reproductive

Pubertal development, female	Reproductive
Reproductive organ size/weight, female	Reproductive
Liver Weight/Hepatomegaly	Hepatobiliary
Sex hormone levels, male	Reproductive

Maternal weight gain	Reproductive
Developmental milestones	Developmental
Offspring mortality	Developmental
Weight and size (early life)	Developmental
Dental effects	Musculoskeletal
Activity level	Nervous System

Motor function	Nervous System
Cognitive function	Nervous System
Emotional state/affective behavior	Nervous System

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

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Aroclor 1254

Aroclor 1254

Aroclor 1254

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Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Rat	Oral-gavage
Rat	Injection-sc

Rat	Injection-sc
Rat	Injection-sc
Rat	Injection-sc
Rat	Injection-sc
Rat	Injection-ip

Rat	Oral-diet
Mouse	Oral-gavage
Mouse	Oral-gavage
Mouse	Oral-gavage
Mouse	Oral-gavage
Mouse	Oral-gavage

Mouse	Oral-gavage
Mouse	Oral-gavage
Mouse	Oral-gavage

N/A	1	N/A	N/A
-----	---	-----	-----

			N/A
N/A	10	N/A	

N/A	2	N/A	N/A
			N/A

			N/A
			N/A
			N/A

2	6	N/A	N/A
---	---	-----	-----

Dams exposed GD6-PND21; mean proportion of visual stimuli detected at various intensities altered after PND 90
"Litter size ranged from 4 to 17 pups with an overall mean of 11.6 pups per litter"; Litters culled to 8 on PND4

Rat dams were injected with 10 mg/kg-day from GD 10 - GD 18 (nine injections). There was no effect on F0 maternal body weight gain during gestation (Table 3).

Rat dams were dosed injected with 10 mg/kg-day from GD 10 - GD 18 (nine injections). There was no effect on the timing of vaginal opening in F1 females (Table 3)

Rat dams were injected with 10 mg/kg-day from GD 10 - GD 18 (nine injections). Litter size of LOAEL dose group was 10.2 (Table 3); litters were adjusted to 8-10 at PND 2. LOAEL is based on significant decrease in absolute uterine weight in 12-week-old F1 females (Table 4).

Male rats (90 days old) were injected with 2 mg/kg-day ip for 30 days. LOAEL based on significantly decreased serum estradiol and testosterone in blood collected 24 hours after the last injection (Figure 3).

Rat dams were dosed with 0 or 5 mg/kg-day from GD 7 - PND 15. Default gestation length used when calculating dosing duration. There was no effect on maternal body weight or maternal body weight gain in gestation or lactation (Figure 2A-B).

Mouse dams were dosed with 6, 18, or 54 mg/kg-d every 3 d from GD6-PND20; Morris water maze performance was altered at 8 weeks of age
Litter size NR; use default value; litters culled to 5-6 on PND1

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21

Good

Good

Good

Not reported (interpreted as Deficient)

Good

Good

Not reported (interpreted as Deficient)

Good

Good

Not reported (interpreted as Deficient)

Good

Good

Not reported (interpreted as Deficient)

Good

Good

Not reported (interpreted as Deficient)

Good

Good

Not reported (interpreted as Deficient)

Good

Good

Not reported (interpreted as Deficient)

Good

Good

Not reported (interpreted as Deficient)

Good

Good

Sugawara et al.	2006	1416422
Chung et al.	2001	1416578
Chung et al.	2001	1416578
Chung et al.	2001	1416578
Chung et al.	2001	1416578
Chung et al.	2001	1416578
Chung et al.	2001	1416578
Chung et al.	2001	1416578
Kutlu et al.	2007	1416637
Kutlu et al.	2007	1416637

maternal body weight during gestation and lactation

female sexual behavior (lordosis, pacing tests)

female sexual behavior (lordosis, pacing tests)

female sexual behavior (lordosis, pacing tests)

female sexual behavior (lordosis, pacing tests)

estrous cyclicity

estrous cyclicity

liver enzyme activityliver histopathology

liver enzyme activityliver histopathology

Maternal weight gain	Reproductive
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Sexual behavior	Nervous System
Sexual behavior	Nervous System

Sexual behavior	Nervous System
Sexual behavior	Nervous System
Estrous/menstrual cycle characteristics	Reproductive
Estrous/menstrual cycle characteristics	Reproductive
Liver Enzyme Induction	Hepatobiliary
Liver Histopathology	Hepatobiliary

Aroclor 1254

Aroclor 1221

Aroclor 1254

Aroclor 1221

Aroclor 1254

Aroclor 1221

Aroclor 1254

Aroclor 1221Aroclor 1254

Aroclor 1221Aroclor 1254

Primary

Secondary

Secondary

Primary

Primary

Secondary

Secondary

N/A

N/A

N/A

2 N/A

N/A

N/A

N/A

Pregnant mice were dosed with 0, 6, 18, or 54 mg/kg every 3 days by gavage from GD 6 - PND 20. Text states that there was no effect on maternal body weight during gestation and lactation. Starting age reported as "female at sexual maturity"; assume 50 d.

Rat dams were injected ip with 2.5 or 5 mg PCBs (total administered dose) over 7 d (PND 1-7). Doses of 2 and 4 mg/kg-d calculated using subchronic reference value for body weight (0.179 kg female) provided for Long-Evans rats in EPA 1988. Litter size was reduced to 8 at PND 1. Pups were weaned at PND 28. "Neonatal treatment with A1221 did not have any significant effects on female sexual behavior."

Rat dams were injected ip with 2.5 or 5 mg PCBs (total administered dose) over 7 d (PND 1-7). Doses of 2 and 4 mg/kg-d calculated using subchronic reference value for body weight (0.179 kg female) provided for Long-Evans rats in EPA 1988. Litter size was reduced to 8 at PND 1. Pups were weaned at PND 28. Alterations in lordosis quotient (both pacing and nonpacing) and intromission return latency measured after PND 67.

Adult female rats (60 d of age) were injected ip with 2.5 or 5 mg PCBs (total administered dose) over 7 d. Doses of 2 and 4 mg/kg-d calculated using subchronic reference value for body weight (0.179 kg female) provided for Long-Evans rats in EPA 1988. No effects on female sexual behavior were observed.

Adult female rats (60 d of age) were injected ip with 2.5 or 5 mg PCBs (total administered dose) over 7 d. Doses of 2 and 4 mg/kg-d calculated using subchronic reference value for body weight (0.179 kg female) provided for Long-Evans rats in EPA 1988. No effects on female sexual behavior were observed.

0, 2.5, 5 mg/day

Rat dams were injected ip with 2.5 or 5 mg PCBs (total administered dose) over 7 d (PND 1-7). Doses of 2 and 4 mg/kg-d calculated using subchronic reference value for body weight (0.179 kg female) provided for Long-Evans rats in EPA 1988. Litter size was reduced to 8 at PND 1. Pups were weaned at PND 28. Text states that treated animals showed regular estrous cycles as indicated by vaginal smears taken starting at PND 50.

18	0.9	0.229	0.264	6	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

Herr et al.	2001	1416693
Käkelä et al.	2002	1416764
Käkelä et al.	2002	1416764
Käkelä et al.	2002	1416764
Käkelä et al.	2002	1416764
Taylor et al.	2002	1417198
Pravettoni et al.	2005	1417513
Nakai et al.	2005	1417552
Nakai et al.	2005	1417552
Murugesan et al.	2005	1417568
Murugesan et al.	2005	1417568

visual-evoked potentials (flash-evoked potentials), somatosensory-evoked potentials (SEPcortex and SEPcerebellum), peripheral nerve-evoked potentials (compound nerve action potential and nerve conduction velocity-evoked potentials), low-frequency auditory function (reflex modification audiometry)

litter size

pregnancy rate

liver phospholipids and triacylglycerolsrelative liver weightsalcoholic vitA1 and A2 and esterified A1 and A2 in liver, prop

liver phospholipids and triacylglycerolsrelative liver weightsalcoholic vitA1 and A2 and esterified A1 and A2 in liver, prop

liver phospholipids and triacylglycerolsrelative liver weightsalcoholic vitA1 and A2 and esterified A1 and A2 in liver, prop

schedule-controlled behavior: acquisition and steady-state performance under a series of fixed-interval reinforcement schedules

maternal weight gain

brain weight

neurotransmitter levels

testis, epididymis, seminal vesicle, and ventral prostatic weight

serum testosterone and estradiol levels

Sensory function	Nervous System
Pregnancy/conception rate	Reproductive
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Micronutrients	Hepatobiliary
Cognitive function	Nervous System

Maternal weight gain	Reproductive
Brain-histological, structural, morphological	Nervous System

Neurotransmitter levels	Nervous System
Reproductive organ size/weight, male	Reproductive

Sex hormone levels, male	Reproductive
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Aroclor 1254

Aroclor 1242

Aroclor 1242

Aroclor 1242

Aroclor 1242

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Secondary

Primary

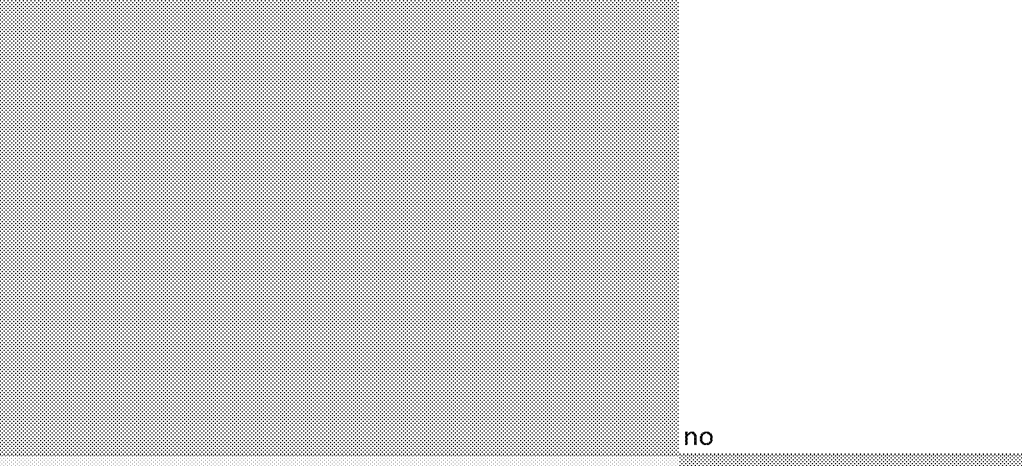
Secondary

Primary

Primary

Primary	NR (225-275g male)
Primary	90

Primary	90
---------	----

[illegible]

150	2	2	1	6
82	2	2	6	6
		2	130	130
		2	2	2
		2	2	2

Rat dams dosed from GD 6 to PND 21. Sensory testing performed at PND 128-140. Litter size NR; use default.

Dams exposed GD6-PND21; FI 3-min with reinforcement omission rate of response altered after PND60
Litter size NR; use default; culled to 10 on PND4

Pregnant rats were given AR1254 via gavage (25 mg/kg) from GD15 to GD19. Authors report no SS changes in mean dam body weight in the text of the manuscript- numbers are given on p. 525. Starting mass or age of dams is not provided.

Adult male rats (225-275g) exposed for 5 d. "There was no significant change in the brain weights of any group relative to the non-dosed controls..."

Adult male rats (225-275g) exposed for 5 d. Alterations in neurotransmitter levels in caudate (HIAA, HVA and dopamine, serotonin, 3-MT), nucleus accumbens (dopamine), hippocampus (serotonin) and substantia nigra DOPAC, HIAA, dopamine and serotonin).

adult male wistar rats (90 days, 190-210 g at onset) were given AR1254 at 2 mg/kg-d via IP injection for 30 days. Testis, epidymis, ventral prostate, and seminal vesicle weights are reported in Table 1. Repro organ weights were all decreased with AR1254 exposure.

adult male wistar rats (90 days, 190-210 g at onset) were given AR1254 at 2 mg/kg-d via IP injection for 30 days. Figure 1 displays the T and E2 concentrations. Hormone levels were decreased with AR1254 exposure.

22	0.9	0.094	0.154	10	21
52	0.9	0.312	0.066	5	56
52	0.9	0.312	0.066	5	56
52	0.9	0.312	0.066	5	56
52	0.9	0.312	0.066	5	56
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

Murugesan et al.	2005	1417737
Käkelä et al.	2003	1417774
Käkelä et al.	2003	1417774
Käkelä et al.	2003	1417898
Käkelä et al.	2003	1417898
Lee et al.	2003	1417916
Alston et al.	2003	1418042
Alston et al.	2003	1418042
Salama et al.	2003	1418293
Salama et al.	2003	1418293
Salama et al.	2003	1418293
Ahmad et al.	2003	1418554
Ahmad et al.	2003	1418554
Ahmad et al.	2003	1418554
Andric et al.	2003	1418598

serum testosterone and serum estradiol

cholesterolhepatic vitamin A levels

cholesterolhepatic vitamin A levels

total lipidslevels of different fatty acid complexes of both vitamin A2, A1, E

total lipidslevels of different fatty acid complexes of both vitamin A2, A1, E

gestation length

seminiferous tubule histopathology

testes weight

estrous cyclicity

age of vaginal opening, age at first estrus

uterine and ovarian weight

estrous cyclicity

age of vaginal opening, age at first estrus

uterine and ovarian weight

estrous cyclicity

age of vaginal opening, age at first estrus

uterine and ovarian weight

testicular and accessory sex organ histopathology

testicular diameter

serum testosterone

testicular and accessory sex organ histopathology

testicular diameter

serum testosterone

testicular and accessory sex organ histopathology

testicular diameter

serum testosterone

GSH, SOD, catalase, GST and GSH-Px in the denucleated fractions of rat liver

Sex hormone levels, male	Reproductive
Cholesterol	Hepatobiliary
Micronutrients	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Micronutrients	Hepatobiliary

Gestation length and preterm birth	Reproductive
Reproductive organ histopathology, male	Reproductive

Reproductive organ size/weight, male	Reproductive
Estrous/menstrual cycle characteristics	Reproductive

Pubertal development, female	Reproductive
Reproductive organ size/weight, female	Reproductive

Reproductive organ histopathology, male	Reproductive
Reproductive organ size/weight, male	Reproductive

Sex hormone levels, male	Reproductive
Liver Enzyme Induction	Hepatobiliary

Aroclor 1254

Aroclor 1242

Aroclor 1242

Aroclor 1242

Aroclor 1242

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1221

Aroclor 1221

Aroclor 1221

Aroclor 1242

Aroclor 1242

Aroclor 1242

Pyralene

Rat	Injection-ip
Mink	CHECK
Mink	CHECK
Mink	Oral-diet
Mink	Oral-diet

Rat	Injection-ip
Mouse	Oral-diet

Mouse	Oral-diet
Rat	Injection-ip

Rat	Injection-ip
Rat	Injection-ip

Rhesus monkey	Oral-capsule
Rhesus monkey	Oral-capsule

Rhesus monkey	Oral-capsule
Rat	Injection-ipIntratrachealOral-CHECK

Primary	90
---------	----

Primary	64
---------	----

Primary	77
---------	----

Primary	
Secondary	
Secondary	
Secondary	

Primary	1825-2555
Primary	1825-2555

Primary	1825-2555
---------	-----------

30

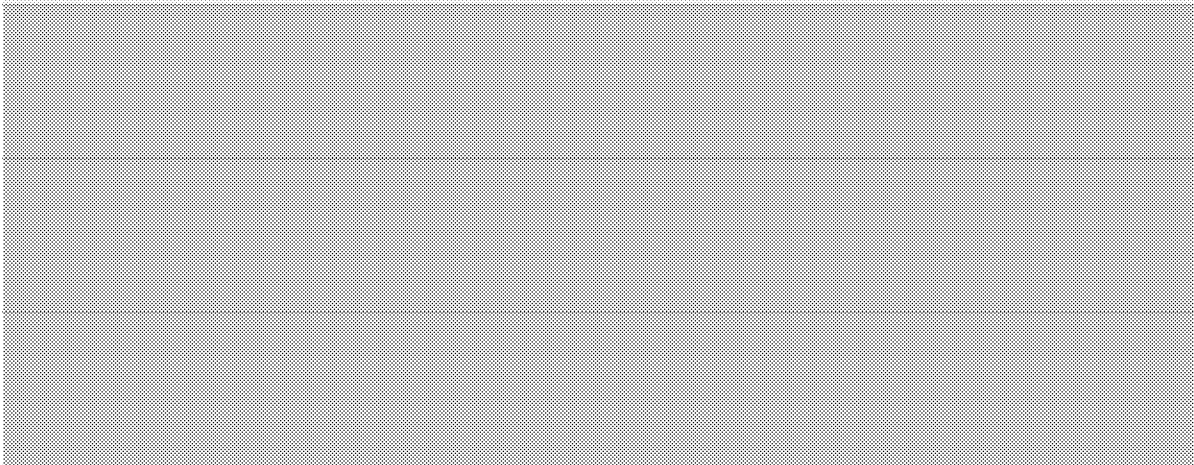
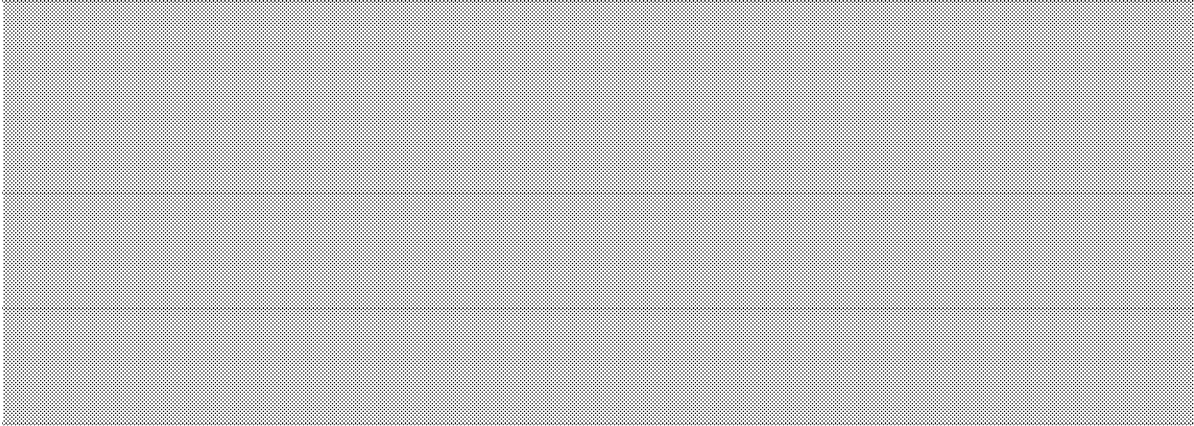
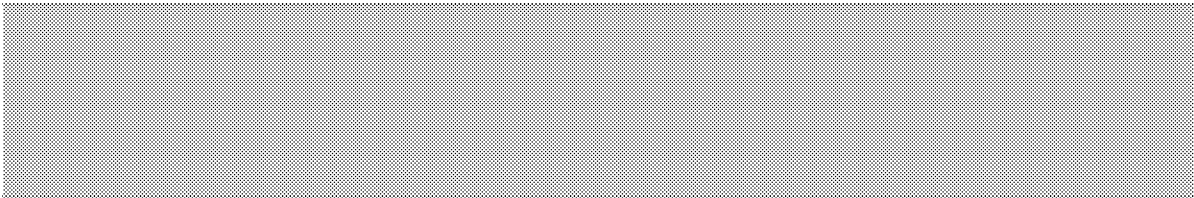
5

30

183

183

183



N/A	2	
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--	--	--

10	25	
N/A	5	

		N/A
--	--	-----

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adult male wistar rats (90 days, 190-210 g at onset) were given AR1254 at 2 mg/kg-d via IP injection for 30 days. Serum testosterone and estradiol were measured and were reduced with PCB treatment- shown in Figure 1.

Rat dams injected with 0, 10, or 25 mg/kg-day i.p. from GD 15-20 (sacrifice on GD 20). Some dams were allowed to deliver. LOAEL based on significant increase in the length of the gestation period (Table 1).

Adult male mice (10-12 weeks old) were dosed with 5 ppm in diet for 30 days. Degenerative alterations in seminiferous tubules are described in text.

Adult male mice (10-12 weeks old) were dosed with 5 ppm in diet for 30 days. No effect on testis weight (Table 1).

Dosed on GD16, PND1, and PND40, 1 mg/kg-day

Dosed on GD16, PND1, and PND40, 1 mg/kg-day

Dosed on GD16, PND1, and PND40, 1 mg/kg-day

	22	0.9	0.094	0.154	10	21
	52	0.9	0.312	0.066	5	56
	52	0.9	0.312	0.066	5	56
	52	0.9	0.312	0.066	5	56
	52	0.9	0.312	0.066	5	56

	22	0.9	0.094	0.154	10	21
	18	0.9	0.229	0.264	6	21

	18	0.9	0.229	0.264	6	21
	22	0.9	0.094	0.154	10	21

	22	0.9	0.094	0.154	10	21
	22	0.9	0.094	0.154	10	21

	168	0.9	0.199	0.054	1	154
	168	0.9	0.199	0.054	1	154

	168	0.9	0.199	0.054	1	154
	22	0.9	0.094	0.154	10	21

Venkataraman et al.	2004	1418732
Venkataraman et al.	2004	1418753
Venkataraman et al.	2004	1418753
Anbalagan et al.	2003	1418793
Anbalagan et al.	2003	1418793
Anbalagan et al.	2003	1418793
Anbalagan et al.	2003	1418793
Khan and Thomas	2004	1418852
Senthil kumar et al.	2004	1418887
Kato et al.	2004	1419262
Sepkovic and Byrne	1984	1442578

serum testosterone, estradiol

ventral prostatic weight

serum testosterone, estradiol

histological effects on testis and epididymis

cauda epididymis weight

serum estradiol, testosterone

sperm count and motility

serotonin (5-HT) concentrations in the brainstem and frontal cortex

absolute and relative testis weight

activity levels and concentrations of UGT1A1/UGT1A6 (measured as T4-UDP-GT), UGT2B1, hepatic type-I T4-deiodinase

ovary weight, uterus weight

Sex hormone levels, male	Reproductive
Reproductive organ size/weight, male	Reproductive

Sex hormone levels, male	Reproductive
Reproductive organ histopathology, male	Reproductive

Reproductive organ size/weight, male	Reproductive
Sex hormone levels, male	Reproductive

Sperm/semen parameters	Reproductive
Neurotransmitter levels	Nervous System

Reproductive organ size/weight, male	Reproductive
Liver Enzyme Induction	Hepatobiliary
Reproductive organ size/weight, female	Reproductive

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Kanechlor 500

Aroclor 1242

Rat	Injection-ip
Rat	Injection-ip
Rat	Injection-ip
Rat	Injection-ip
Rat	Injection-ip
Rat	Injection-ip
Rat	Oral-gavage
Rat	Injection-ip
Rat	Injection-ip
Rat	Oral-diet

Primary	90
Primary	90

Primary	90
Primary	90

Primary	90
Primary	90

Primary	90
Primary	31.5

Primary	90
Primary	NR (225 g female)

30

30

30

15

30

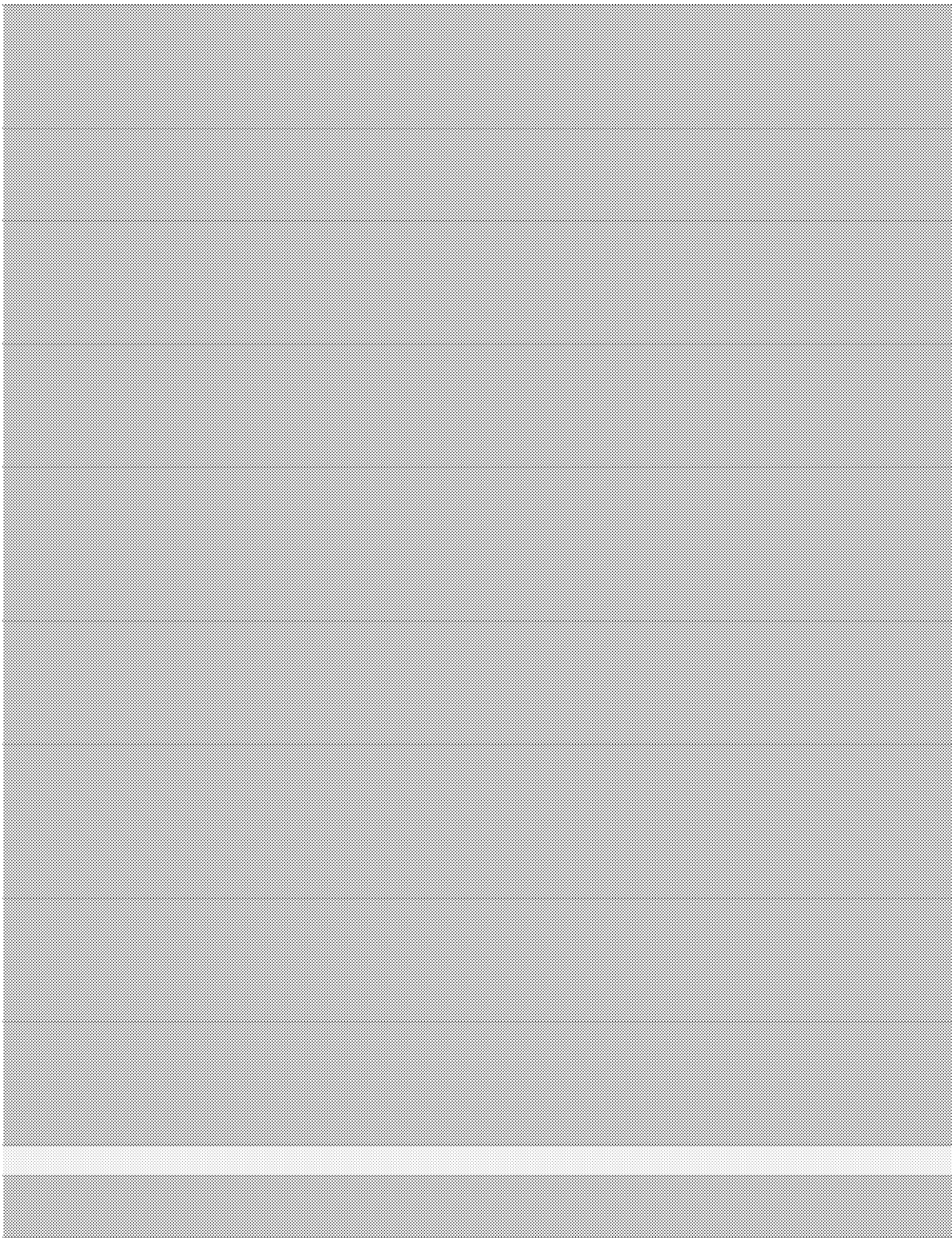
30

30

1

30

213



		2	2
		2	2
		2	2
		2	0.2
		2	0.2
		2	0.2
		2	0.2
		2	330
		2	2
		3	50

N/A	2	
N/A	2	
N/A	2	
N/A	0.2	
N/A	0.2	
N/A	0.2	
N/A	0.2	
N/A	330	
N/A	2	

Adult male rats (90 days old) were injected with 2 mg/kg-day for 30 days. LOAEL is based on decreased serum estradiol and testosterone at necropsy (Figure 4).

Adult male rats (90 days old) were injected with 2 mg/kg-day for 30 days. LOAEL is based on decreased ventral prostate weight (Table 1).

Adult male rats (90 days old) were injected with 2 mg/kg-day for 30 days. LOAEL is based on decreased serum testosterone and estradiol at necropsy (Table 1).

Adult male rats (90 days old) were injected with 200 ug/kg-day ip for either 15 or 30 days. LOAEL is based on some histopathological effects after 15 days of exposure.

Adult male rats (90 days old) were injected with 200 ug/kg-day ip for either 15 or 30 days. LOAEL is based on significantly decreased cauda epididymis weight after 30 days exposure; no effects after 15 days exposure (Table 2).

Adult male rats (90 days old) were injected with 200 ug/kg-day ip for either 15 or 30 days. LOAEL is based on significantly decrease in serum estradiol t after 30 days exposure; no effects after 15 days exposure (Table 1).

Adult male rats (90 days old) were injected with 200 ug/kg-day ip for either 15 or 30 days. LOAEL is based on significantly decreased sperm counts and motility after 30 days exposure; no effects after 15 days exposure (Table 2).

Single dose to adolescent male rats (0.33 mg/g bw = 330 mg/kg bw). Starting age 4-5 wk (assume 31.5 d). Endpoint evaluations 7 d after dosing. Significant reductions in frontal cortex serotonin levels.

Adult male rats (90 days) were injected ip with 2 mg/kg-day for 30 days. LOAEL is based on significantly decreased absolute and relative testis weight (Table 1).

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

Sepkovic and Byrne	1984	1442578
Sepkovic and Byrne	1984	1442578
Barter and Klaassen	1994	1442640
Barter and Klaassen	1994	1442640
Hallgren et al.	2001	1442712
Hallgren et al.	2001	1442712
Hallgren et al.	2001	1442712
Murk et al.	1991	1442766
Murk et al.	1991	1442766
Murk et al.	1991	1442766
Murk et al.	1991	1442766
Kato et al.	2007	1442779
Backlin and Bergman	1992	1482578
Backlin and Bergman	1992	1482578
Backlin and Bergman	1992	1482578
Backlin and Bergman	1992	1482578
Backlin and Bergman	1992	1482578
Backlin and Bergman	1992	1482578
Bergman et al.	1992	1482579
Bergman et al.	1992	1482579
Hakansson et al.	1992	1482580
Bennett et al.	1938	1482916
Bennett et al.	1938	1482916

ovary weight, uterus weight

liver weight

induction of liver UDP-GT functionliver weight

induction of liver UDP-GT functionliver weight

EROD, PROD, MROD, UDPGT activity, cytochrome P-450 activityrelative liver weight (liver somatic index= liver wt./bw)live

EROD, PROD, MROD, UDPGT activity, cytochrome P-450 activityrelative liver weight (liver somatic index= liver wt./bw)live

EROD, PROD, MROD, UDPGT activity, cytochrome P-450 activityrelative liver weight (liver somatic index= liver wt./bw)live

cytochrome P-450, EROD, PROD, plasma retinol, hepatic retinoid levelliver pathologyliver weight (absolute)

cytochrome P-450, EROD, PROD, plasma retinol, hepatic retinoid levelliver pathologyliver weight (absolute)

cytochrome P-450, EROD, PROD, plasma retinol, hepatic retinoid levelliver pathologyliver weight (absolute)

cytochrome P-450, EROD, PROD, plasma retinol, hepatic retinoid levelliver pathologyliver weight (absolute)

hepatic microsomal activities of benzyloxyresorufin O-dealkylase(CYP2B1/2 and CYP3A1/2), pentoxyresorufin O-dealkyla

ovulation

ovulation

mean number of placental sites

mean number of placental sites

ovary weight

ovary weight

liver histological changes (including hemosiderosis of kupffer cells, polymorphonuclear cells in the liver, mononuclear cel

liver histological changes (including hemosiderosis of kupffer cells, polymorphonuclear cells in the liver, mononuclear cel

liver, lung and kidney vitamin A contents

morphology, pigmentation, necrosis, hyaline degenerationliver weight

morphology, pigmentation, necrosis, hyaline degenerationliver weight

Reproductive organ size/weight, female	Reproductive
Liver Weight/Hepatomegaly	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Micronutrients	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Micronutrients	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Ovulation	Reproductive
Ovulation	Reproductive
Pregnancy/conception rate	Reproductive
Pregnancy/conception rate	Reproductive
Reproductive organ size/weight, female	Reproductive
Reproductive organ size/weight, female	Reproductive
Liver Histopathology	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Micronutrients	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary

Aroclor 1254

Aroclor 1242Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Kanechlor 500

Aroclor 1254

Clophen A50

Aroclor 1254

Clophen A50

Aroclor 1254

Clophen A50

Aroclor 1254Clophen A50

Aroclor 1254Clophen A50

Aroclor 1254Clophen A50

PCBs

PCBs

[illegible]

Primary

90

Primary

Primary

730365

Primary

Primary

730365

Primary

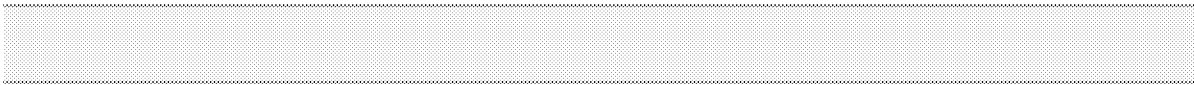
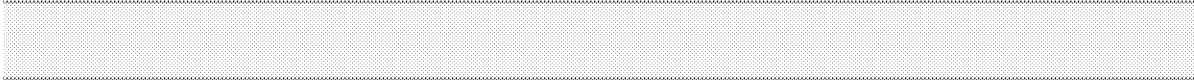
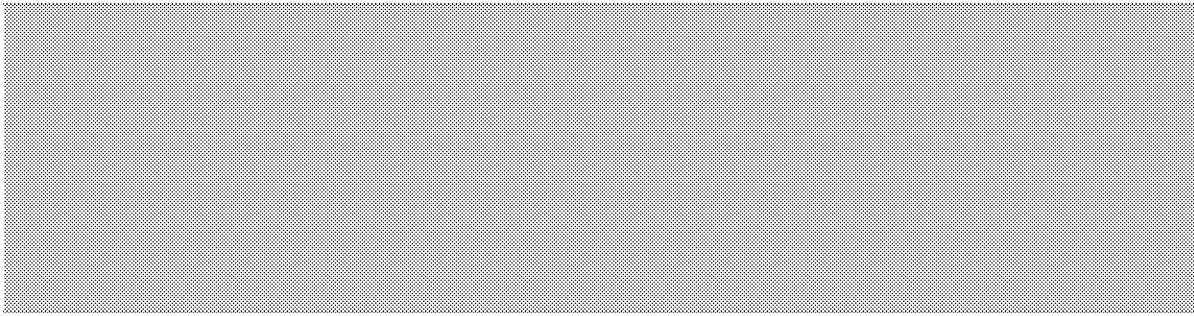
Primary

730365

84-9679-94

84-9679-94

84-9679-94



N/A	50
-----	----

	N/A
	N/A
	N/A

Female rats were dosed with 50 ppm in diet for approximately 7 months. LOAEL based on significantly increased relative ovary weight (Table 2). [Body weight and absolute organ weights are not reported, which limits the interpretation of the absolute organ weight data.]

Starting age NR; 225 g Sprague-Dawley females; assume 90 d

One-year-old female mink were dosed with 1.64 mg/day beginning ~28 days prior to mating and continuing until parturition. Text states that there was no effect on the mean number of corpora per female. Exposure duration recorded here as 28 days.

0, 2 mg/day0, 1.64 mg/day

One-year-old female mink were dosed with 1.64 mg/day beginning ~28 days prior to mating and continuing until parturition. Text states that there was no effect on the mean number of placental sites. Exposure duration recorded here as 28 days.

0, 2 mg/day0, 1.64 mg/day

One-year-old female mink were dosed with 1.64 mg/day beginning ~28 days prior to mating and continuing until parturition. Text states that "There was no significant difference in ovary weights between the control group and exposed groups." Exposure duration recorded here as 28 days.

0, 2 mg/day0, 1.64 mg/day

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
CHECK	0.9 CHECK	CHECK	CHECK	CHECK	
CHECK	0.9 CHECK	CHECK	CHECK	CHECK	
CHECK	0.9 CHECK	CHECK	CHECK	CHECK	
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
22	0.9	0.094	0.154	10	21
52	0.9	0.312	0.066	5	56
52	0.9	0.312	0.066	5	56
52	0.9	0.312	0.066	5	56
52	0.9	0.312	0.066	5	56
52	0.9	0.312	0.066	5	56
52	0.9	0.312	0.066	5	56
52	0.9	0.312	0.066	5	56
52	0.9	0.312	0.066	5	56
52	0.9	0.312	0.066	5	56
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

[illegible]

Edqvist et al.	1992	1486360
Edqvist et al.	1992	1486360
Hu et al.	2012	1509275
Hu et al.	2012	1509275
Martin et al.	2012	1510306
Martin et al.	2012	1510306
Uslu et al.	2013	1800330
Uslu et al.	2013	1800330
Uslu et al.	2013	1800330
Jacob et al.	1981	2125390
Robinson et al.	1975	2142111
Robinson et al.	1975	2142111
Walker et al.	2014	2149404
Walker et al.	2014	2149404
Walker et al.	2014	2149404
Walker et al.	2014	2149404

S-cholesterolalanine aminotransferase (S-ALAT), aspartate aminotransferase (S-ASAT), alkaline phosphatase (S-ALP), glut
S-cholesterolalanine aminotransferase (S-ALAT), aspartate aminotransferase (S-ASAT), alkaline phosphatase (S-ALP), glut
CYP 1A1, 1A2, 2B1, 2B2 activityhistopath on liver (small foci of mononuclear cells not above background)
CYP 1A1, 1A2, 2B1, 2B2 activityhistopath on liver (small foci of mononuclear cells not above background)
hepatic UDP-UGT activityrelative liver weight
hepatic UDP-UGT activityrelative liver weight

uterus weight and histopathology
serum LH and FSH levels

uterus weight and histopathology
serum LH and FSH levels

uterus weight and histopathology
serum LH and FSH levels

liver microsomal cytochrome p450, time course of benz[a]anthracene metabolism, profile of benz[a]anthracene metabol
aryl hydrocarbon hydroxylase activity, cytochrome P450 concentrationliver necrosis
aryl hydrocarbon hydroxylase activity, cytochrome P450 concentrationliver necrosis

estrous cyclicity
pubertal timing (male and female)
uterine weight
GSI
serum LH, T, E

estrous cyclicity
pubertal timing (male and female)
uterine weight
GSI
serum LH, T, E

estrous cyclicity
pubertal timing (male and female)
uterine weight
GSI
serum LH, T, E

estrous cyclicity
pubertal timing (male and female)
uterine weight
GSI
serum LH, T, E

Cholesterol	Hepatobiliary
Serum Biomarkers of Liver Health & Function	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary

Reproductive organ histopathology, female	Reproductive
Reproductive organ size/weight, female	Reproductive

Sex hormone levels, female	Reproductive
Liver Enzyme Induction	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Histopathology	Hepatobiliary

Estrous/menstrual cycle characteristics	Reproductive
Pubertal development, female	Reproductive

Pubertal development, male	Reproductive
Reproductive organ size/weight, female	Reproductive

Aroclor 1254

Aroclor 1254

Chicago Air Mixture

Chicago Air Mixture

Aroclor 1242Aroclor 1254

Aroclor 1242Aroclor 1254

Aroclor 1221

Aroclor 1221

Aroclor 1221

PCBs

Aroclor 1254

Aroclor 1254

Aroclor 1221

Aroclor 1221

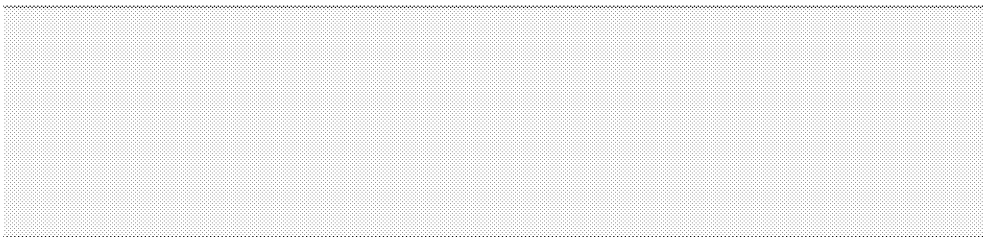
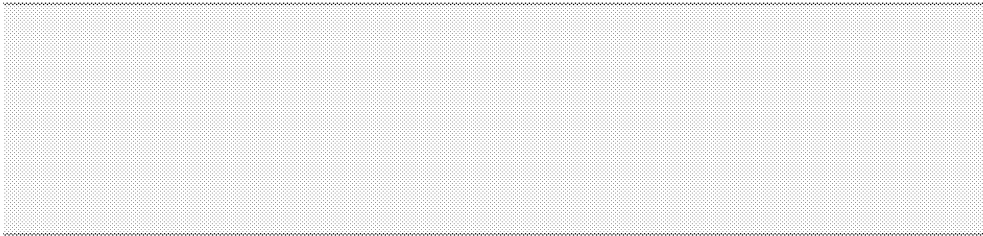
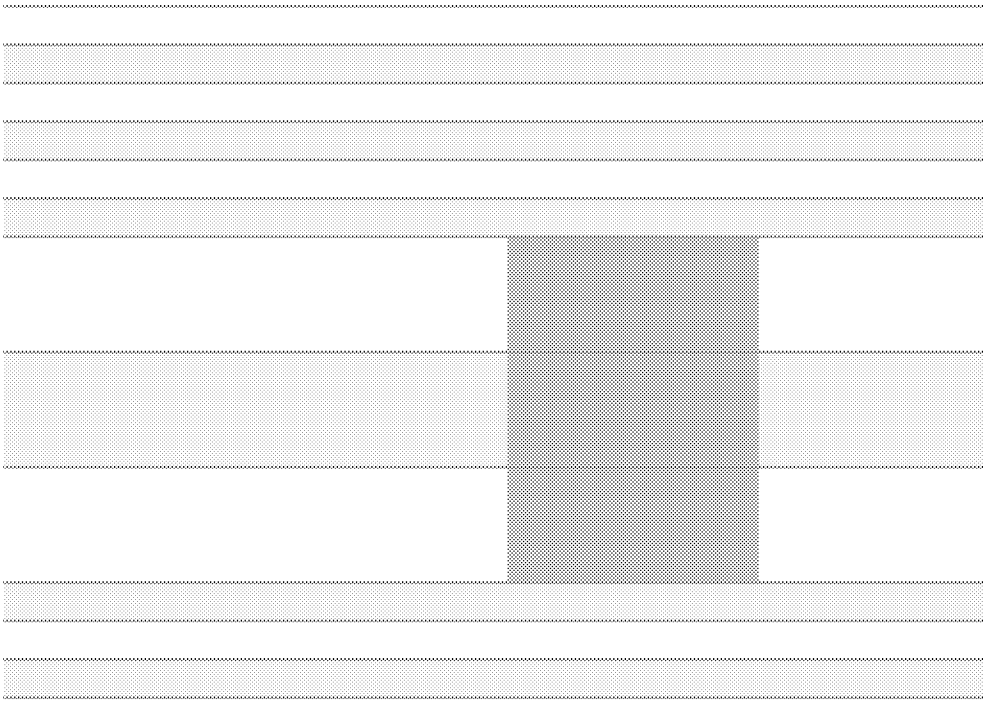
Aroclor 1221

Aroclor 1221

3

3

3



Dosed on GD16 and GD180, 1 mg/kg-day

Dosed on GD16 and GD180, 1 mg/kg-day

Dosed on GD16 and GD180, 1 mg/kg-day

Dosed on GD16 and GD180, 1 mg/kg-day

52	0.9	0.312	0.066	5	56
52	0.9	0.312	0.066	5	56
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

Walker et al.	2014	2149404
Walker et al.	2014	2149404
Walker et al.	2014	2149404
Gray et al.	2013	2149612
Selvakumar et al.	2013	2149762
Selvakumar et al.	2013	2149762
Selvakumar et al.	2013	2149762
Selvakumar et al.	2013	2149762
Selvakumar et al.	2013	2149762
Raj et al.	2014	2149829
Raj et al.	2014	2149829
Poon et al.	2013	2149921
Faass et al.	2013	2149928

estrous cyclicity
pubertal timing (male and female)
uterine weight
GSI
serum LH, T, E

estrous cyclicity
pubertal timing (male and female)
uterine weight
GSI
serum LH, T, E

estrous cyclicity
pubertal timing (male and female)
uterine weight
GSI
serum LH, T, E

relative liver weight
open field test

brain histopathology

learning and memory in the 8-arm radial maze

open field test

plasma neurotransmitter levels

epididymal histopathology

epididymal weight

locomotor activity (beam breaks)

% of animals with regular estrous cycles

Reproductive organ size/weight, male	Reproductive
Sex hormone levels, female	Reproductive

Sex hormone levels, male	Reproductive
Liver Weight/Hepatomegaly	Hepatobiliary
Activity level	Nervous System
Brain-histological, structural, morphological	Nervous System
Cognitive function	Nervous System
Emotional state/affective behavior	Nervous System
Neurotransmitter levels	Nervous System
Reproductive organ histopathology, male	Reproductive

Reproductive organ size/weight, male	Reproductive
Activity level	Nervous System

Estrous/menstrual cycle characteristics	Reproductive
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Aroclor 1221

Aroclor 1221

Aroclor 1221

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Fox River PCB mixture

Aroclor 1254

Secondary	
Secondary	
Secondary	
Primary	90
Primary	90
Primary	90
Primary	90
Primary	90
Primary	90
Primary	60
Primary	60
Secondary	
Secondary	

[illegible]

16

18

16

18

16

18

-28

43 N/A

N/A

21

10

18 N/A

N/A

21

Dosed on GD16 and GD180, 1 mg/kg-day

Dosed on GD16 and GD180, 1 mg/kg-day

Dosed on GD16 and GD180, 1 mg/kg-day

N/A

N/A

N/A

N/A

N/A

Adult male rats were injected with 2 mg/kg-day ip for 30 days. LOAEL is based on histopathological changes in epididymis (Figures 9-11 and described in text). Starting age NR; 180 - 200 g Wistar males; assume 60 d

Adult male rats were injected with 2 mg/kg-day ip for 30 days. LOAEL is based on decreased relative epididymal weight (Figure 1B). Starting age NR; 180 - 200 g Wistar males; assume 60 d

Rat dams exposed 28 d prior to mating and continuing until pups were weaned on PND 21. Litter size NR; use default. Litters culled to 10 on PND2. Decreased total number of photobeam breaks as measured after PND 75.

Rat dams were injected with 0, 10, or 30 mg/kg-day from GD 10-18, and estrous cyclicity was evaluated in F1 females at PND 120. Litters culled to 8-10 on PND2; default litter size used. LOAEL is based on increased incidence of irregular estrous cycles (Figure 6).

Not reported (interpreted as Deficient)	Good	Adequate
Not reported (interpreted as Deficient)	Good	Adequate
Not reported (interpreted as Deficient)	Good	Adequate
Not reported (interpreted as Deficient)	Good	Adequate
Not reported (interpreted as Deficient)	Good	Adequate

Walker et al.	2013	2149949
Walker et al.	2013	2149949
Walker et al.	2013	2149949
Walker et al.	2013	2149949
Walker et al.	2013	2149949

length of estrous cycles
litter size
pubertal development (male and female)
reproductive aging
uterus weights
GSI
serum LH, estradiol

length of estrous cycles
litter size
pubertal development (male and female)
reproductive aging
uterus weights
GSI
serum LH, estradiol

length of estrous cycles
litter size
pubertal development (male and female)
reproductive aging
uterus weights
GSI
serum LH, estradiol

length of estrous cycles
litter size
pubertal development (male and female)
reproductive aging
uterus weights
GSI
serum LH, estradiol

length of estrous cycles
litter size
pubertal development (male and female)
reproductive aging
uterus weights
GSI
serum LH, estradiol

Estrous/menstrual cycle characteristics

Reproductive

Pregnancy/conception rate

Reproductive

Pubertal development, female

Reproductive

Pubertal development, male

Reproductive

Reproductive aging

Reproductive

Aroclor 1221

Aroclor 1221

Aroclor 1221

Aroclor 1221

Aroclor 1221

Rat

Injection-ip

Rat

Injection-ip

Rat

Injection-ip

Rat

Injection-ip

Rat

Injection-ip

Secondary	
Secondary	
Secondary	
Secondary	
Secondary	
Secondary	



16

18

16

18

16

18

16

18

16

18

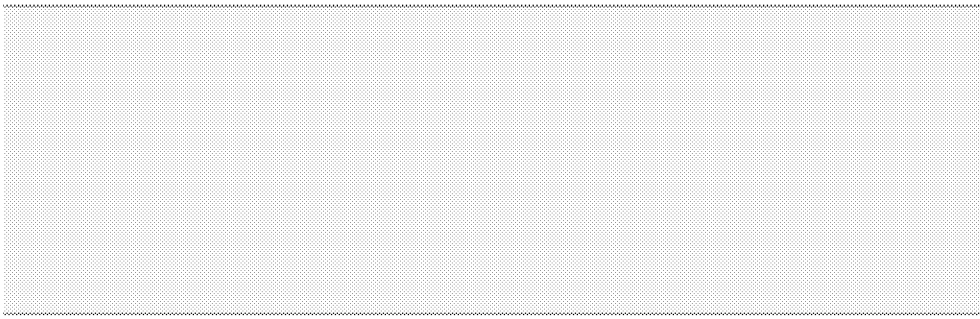
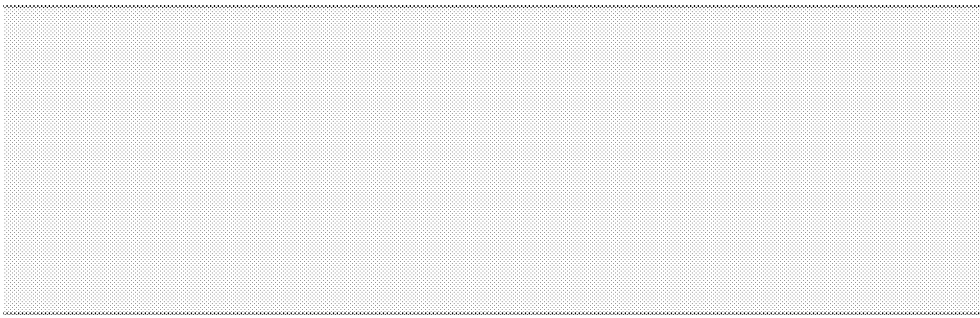
2

2

2

2

2



Dosed on GD16 and GD180, 1 mg/kg-day

Dosed on GD16 and GD180, 1 mg/kg-day

Dosed on GD16 and GD180, 1 mg/kg-day

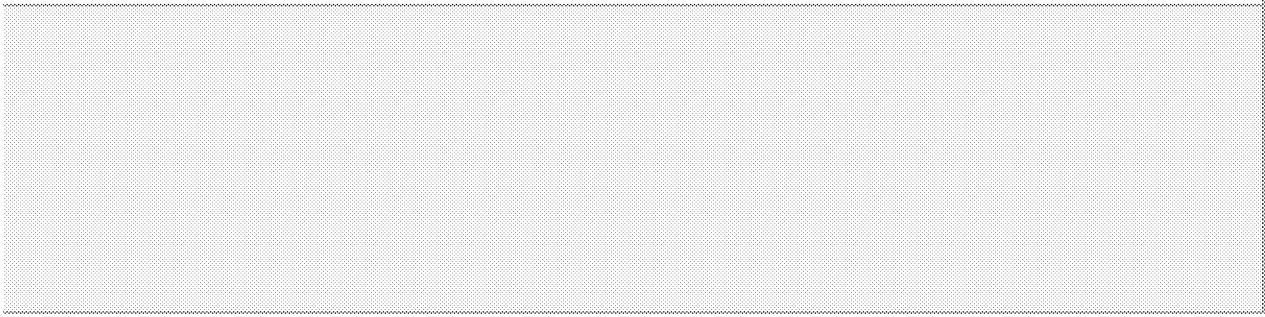
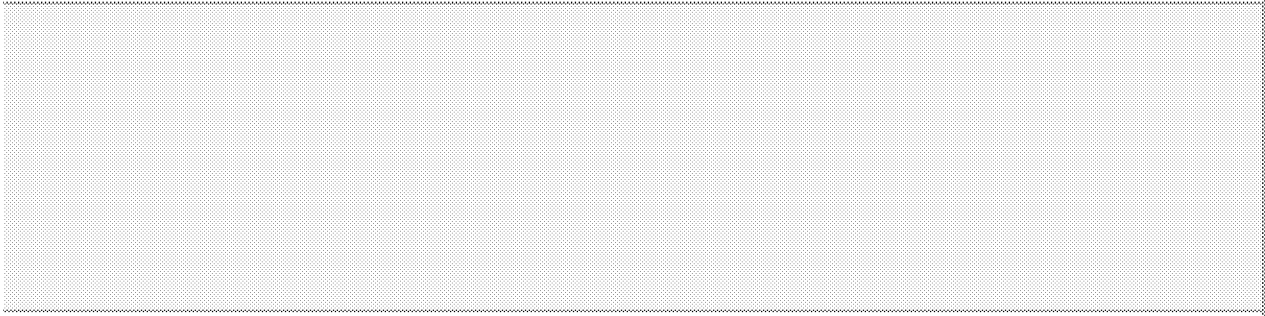
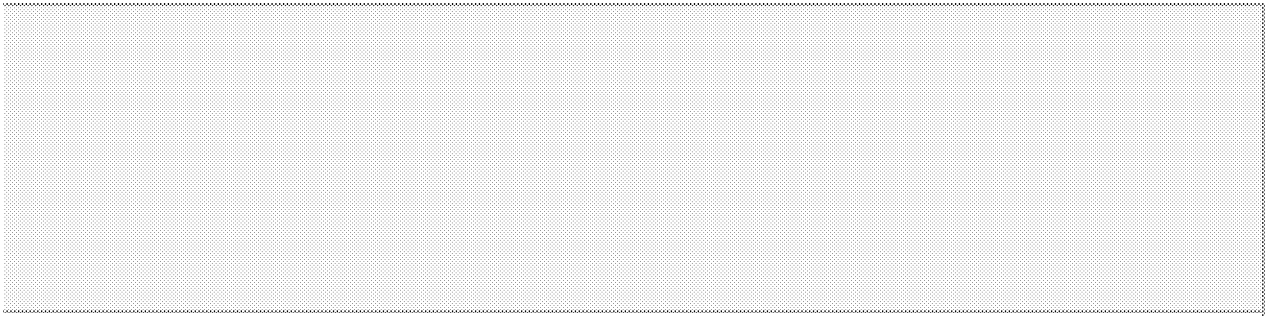
Dosed on GD16 and GD180, 1 mg/kg-day

Dosed on GD16 and GD180, 1 mg/kg-day

22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21



Walker et al.	2013	2149949
Walker et al.	2013	2149949
Walker et al.	2013	2149949
Walker et al.	2013	2149949
Ahmad et al.	2001	2151442
Ahmad et al.	2001	2151442
Ahmad et al.	2001	2151442

length of estrous cycles
litter size
pubertal development (male and female)
reproductive aging
uterus weights
GSI
serum LH, estradiol

length of estrous cycles
litter size
pubertal development (male and female)
reproductive aging
uterus weights
GSI
serum LH, estradiol

length of estrous cycles
litter size
pubertal development (male and female)
reproductive aging
uterus weights
GSI
serum LH, estradiol

length of estrous cycles
litter size
pubertal development (male and female)
reproductive aging
uterus weights
GSI
serum LH, estradiol

histopathology of testes and accessory sex organs

testicular volume

serum testosterone levels

Reproductive organ size/weight, female	Reproductive
Reproductive organ size/weight, male	Reproductive

Sex hormone levels, female	Reproductive
Sex hormone levels, male	Reproductive

Reproductive organ histopathology, male	Reproductive
Reproductive organ size/weight, male	Reproductive
Sex hormone levels, male	Reproductive

Aroclor 1221

Aroclor 1221

Aroclor 1221

Aroclor 1221

Aroclor 1254

Aroclor 1254

Aroclor 1254

Rat

Injection-ip

Rat

Injection-ip

Rat

Injection-ip

Rat

Injection-ip

Rhesus Monkey

Oral-capsule

Rhesus Monkey

Oral-capsule

Rhesus Monkey

Oral-capsule

Secondary	
Secondary	
Secondary	
Secondary	

Primary	2190
Primary	2190
Primary	

182.5

182.5

16

18

16

18

16

18

16

18

	2	0.2	0.2

0.2

Dosed on GD16 and GD180, 1 mg/kg-day

Dosed on GD16 and GD180, 1 mg/kg-day

Dosed on GD16 and GD180, 1 mg/kg-day

Dosed on GD16 and GD180, 1 mg/kg-day

Adult male rhesus monkeys (5-7 years old) were dosed with 200 ug/kg-day for 6 months. LOAEL is based on histopathological lesions in testes, epididymides, and prostate (described in text; representative micrographs shown).

Adult male rhesus monkeys (5-7 years old) were dosed with 200 ug/kg-day for 6 months. LOAEL is based on significantly decreased testicular volume (described in text; data not shown).

Adult male rhesus monkeys (5-7 years old) were dosed with 200 ug/kg-day for 6 months. Text states that there was no effect on testosterone levels (data not shown).

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

168	0.9	0.199	0.054	1	154
168	0.9	0.199	0.054	1	154
168	0.9	0.199	0.054	1	154

Ahmad et al.	2001	2151442
Pratheepa Kumari et al.	2011	2151606
Anderson et al.	1991	2152038
Andric et al.	2000	2152151
Baumann et al.	1983	2153457
Baumann et al.	1983	2153457
Baumann et al.	1983	2153457
Baumann et al.	1983	2153457
Baumann et al.	1983	2153457
Berdanier et al.	1975	2153835
Berdanier et al.	1975	2153835
Borlak et al.	1996	2154830
Borlak et al.	1996	2154830
Branchi et al.	2005	2155131
Branchi et al.	2005	2155131
Branchi et al.	2005	2155131
Branchi et al.	2005	2155131
Branchi et al.	2005	2155131
Branchi et al.	2005	2155131
Branchi et al.	2005	2155131
Branchi et al.	2005	2155131
Branchi et al.	2005	2155131
Branchi et al.	2005	2155131
Branchi et al.	2005	2155131
Branchi et al.	2005	2155131
Branchi et al.	2005	2155131
Branchi et al.	2005	2155131
Bruckner et al.	1974	2155504
Bruckner et al.	1974	2155504
Bruckner et al.	1974	2155504

spermatagonia in testis

brain histology

liver mitochondrial aminopyrine demethylase

serum testosterone

cholesterolhistopathology of liverabsolute and relative liver weightsurinary porphyrinsserum SGOT, SGPT, bilirubin

cholesterolhistopathology of liverabsolute and relative liver weightsurinary porphyrinsserum SGOT, SGPT, bilirubin

cholesterolhistopathology of liverabsolute and relative liver weightsurinary porphyrinsserum SGOT, SGPT, bilirubin

cholesterolhistopathology of liverabsolute and relative liver weightsurinary porphyrinsserum SGOT, SGPT, bilirubin

cholesterolhistopathology of liverabsolute and relative liver weightsurinary porphyrinsserum SGOT, SGPT, bilirubin

liver lipidsliver weight

liver lipidsliver weight

maternal and neonatal hepatic cytochrome P-450, cytochrome b5, and cytochrome-c-(P-450) reductase, CYP1A1, CYP1A2

maternal and neonatal hepatic cytochrome P-450, cytochrome b5, and cytochrome-c-(P-450) reductase, CYP1A1, CYP1A2

litter size, litter number

litter size, litter number

sex ratio

sex ratio

pup weight at birth, pup body weight gain

pup weight at birth, pup body weight gain

serum T4

open field activity (locomotion, rearing)

open field activity (habituation, thigmotaxis)

gestation length

gestation length

hepatic microsomal enzymatic parameters (hydroxylation activity , N-demethylation activity, cytochrome P450, cytochr

hepatic microsomal enzymatic parameters (hydroxylation activity , N-demethylation activity, cytochrome P450, cytochr

hepatic microsomal enzymatic parameters (hydroxylation activity , N-demethylation activity, cytochrome P450, cytochr

Sperm/semen parameters	Reproductive
Brain-histological, structural, morphological	Nervous System
Liver Enzyme Induction	Hepatobiliary
Sex hormone levels, male	Reproductive
Cholesterol	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Porphyrins	Hepatobiliary
Serum Biomarkers of Liver Health & Function	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Offspring mortality	Developmental
Offspring mortality	Developmental
Sex ratio	Developmental
Sex ratio	Developmental
Weight and size (early life)	Developmental
Weight and size (early life)	Developmental
HPT hormones	Endocrine
Activity level	Nervous System
Emotional state/affective behavior	Nervous System
Gestation length and preterm birth	Reproductive
Gestation length and preterm birth	Reproductive
Liver Enzyme Induction	Hepatobiliary
Liver Histopathology	Hepatobiliary
Porphyrins	Hepatobiliary

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1248

Clophen A50

Clophen A50

Clophen A50

Clophen A50

Clophen A50

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1242

Aroclor 1242

Aroclor 1242

	Rhesus Monkey	Oral-capsule
	Rat	Injection-ip
	Mouse	Injection-ip
	Rat	Injection-ip
	Rat	Oral-gavage
	Rat	Oral-gavage
	Rat	Oral-gavage
	Rat	Oral-gavage
	Rat	Oral-gavage
	Rat	Oral-CHECK
	Rat	Oral-CHECK
	Rat	Injection-ip
	Rat	Injection-ip
	Mouse	Oral-gavage
	Mouse	Oral-syringe
	Mouse	Oral-gavage
	Mouse	Oral-syringe
	Mouse	Oral-gavage
	Mouse	Oral-gavage
	Mouse	Oral-gavage/syringe
	Mouse	Oral-gavage/syringe
	Mouse	Oral-gavage/syringe
	Mouse	Oral-gavage
	Mouse	Oral-syringe
	Rat	Injection-ip
	Rat	Injection-ip
	Rat	Injection-ip

Primary	2190
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Primary	90
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Primary

Secondary

Secondary

Secondary

Secondary

Secondary

Secondary

Secondary

Secondary

Secondary

Primary

Primary

N/A	0.2	
N/A	2	
		N/A
		N/A
		N/A
		N/A

N/A	10	N/A
		N/A

N/A	10	N/A
N/A	10	N/A

N/A	10	N/A
		N/A
		N/A

Adult male rhesus monkeys (5-7 years old) were dosed with 200 ug/kg-day for 6 months. LOAEL is based on cessation of spermatogenic activity (described for the histopathological evaluation with representative micrographs).

Adult male rats dosed for 30 d; 90 d of age. Authors report neurodegeneration in PCB exposed rats.

Mouse dams exposed GD6-PND21; pup weight altered by PND14
Litter size NR; use default value

Mouse dams exposed GD6-PND21; T4 levels altered at PND22
Litter size NR; use default value

Mouse dams exposed GD6-PND21; open field locomotion altered at PND90
Litter size NR; use default value

Mouse dams exposed GD6-PND21; open field habituation altered at PND90
Litter size NR; use default value

Mouse dams were dosed with 10 mg/kg-day from GD 6 - PND 1 either by oral gavage or self-administration (drinking from a syringe). Text states that there was no effect on pregnancy duration.

Mouse dams were dosed with 10 mg/kg-day from GD 6 - PND 1 either by oral gavage or self-administration (drinking from a syringe). Text states that there was no effect on pregnancy duration.

168	0.9	0.199	0.054	1	154
22	0.9	0.094	0.154	10	21
18	0.9	0.229	0.264	6	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

Adequate	Good	Adequate
Adequate	Good	Adequate
Adequate	Good	Adequate
Adequate	Good	Adequate
Adequate	Good	Adequate
Adequate	Good	Adequate
Adequate	Good	Adequate
Adequate	Good	Adequate
Adequate	Good	Adequate
Adequate	Good	Adequate
Adequate	Good	Adequate

Bruckner et al.	1974	2155504
Carter and Mercer	1984	2156506
Carter	1983	2156515
Cecil et al.	1973	2156654
Cecil et al.	1973	2156654
Cecil et al.	1973	2156654

Lee et al.	2007	2157496
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Lee et al.	2007	2157496
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Lee et al.	2007	2157496
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Lee et al.	2007	2157496
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Lee et al.	2007	2157496
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Chu et al.	2005	2157748
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Chu et al.	2005	2157748
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hepatic microsomal enzymatic parameters (hydroxylation activity , N-demethylation activity, cytochrome P450, cytochr
liver weight
relative wet liver weight
liver lipidsliver weightliver vitamin A concentration
liver lipidsliver weightliver vitamin A concentration
liver lipidsliver weightliver vitamin A concentration

estrous cyclicity

number of implantation sites, litter size, number of pregnancy index

number of corpora lutea

number of implantation sites, litter size, number of pregnancy index

timing of vaginal opening, age of first vaginal estrus

brain weight

uterus weight, ovary weight

Serum Biomarkers of Liver Health & Function	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Micronutrients	Hepatobiliary

Estrous/menstrual cycle characteristics	Reproductive
Male fertility	Reproductive

Ovulation	Reproductive
Pregnancy/conception rate	Reproductive

Pubertal development, female	Reproductive
Brain-histological, structural, morphological	Nervous System

Reproductive organ size/weight, female	Reproductive
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Aroclor 1242

Aroclor 1254

Aroclor 1254

Aroclor 1242

Aroclor 1242

Aroclor 1242

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Secondary

Secondary

Secondary

Secondary

Secondary

Secondary

Secondary

	10
	10
	10
	10
	10
	no
	10
	10

Category	Value	Value	Value
Category 1	2	50	50
Category 2	2	50	50

			2	10	50
57	2	2		15	15

	2	15	15
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Rat dams dosed from GD 8 - PND 21 to 0, 10, or 50 mg/kg-day, and reproductive effects were evaluated in F1 offspring. Default litter size used. LOAEL based on significantly increased duration of estrous cycle and day of estrous in F1 females (Table 1).

Rat dams dosed from GD 8 - PND 21 to 0, 10, or 50 mg/kg-day, and reproductive effects were evaluated in F1 offspring. Only the 50 mg/kg-day animals were used in the mating trial. Default litter size used. LOAEL based on significant decrease in implantation sites and live fetuses when PCB-exposed F1 males were mated with control females (Table 2).

Rat dams dosed from GD 8 - PND 21 to 0, 10, or 50 mg/kg-day, and reproductive effects were evaluated in F1 offspring. Only the 50 mg/kg-day animals were used in the mating trial. Default litter size used. LOAEL based on significant decrease in corpora lutea in PCB-exposed F1 females mated to control males (Table 2).

Rat dams dosed from GD 8 - PND 21 to 0, 10, or 50 mg/kg-day, and reproductive effects were evaluated in F1 offspring. Only the 50 mg/kg-day animals were used in the mating trial. Default litter size used. LOAEL based on significant decrease in implantation sites and live fetuses in PCB-exposed F1 females mated to control males (Table 2).

Rat dams dosed from GD 8 - PND 21 to 0, 10, or 50 mg/kg-day, and reproductive effects were evaluated in F1 offspring. Default litter size used. LOAEL based on significantly delayed vaginal opening and age at first estrous (Table 1).

Rat dams dosed with 15 mg/kg-day from GD 1 - PND 23. Litters culled to 8 pups at PND 4; use default litter size. LOAEL based on significantly decreased absolute and relative brain weight in F1 pups at PND 35 (Table 1).

Rat dams dosed with 15 mg/kg-day from GD 1 - PND 23. Litters culled to 8 pups at PND 4; use default litter size. LOAEL based on significantly decreased absolute uterus weight in F1 pups at PND 35 (Table 1).

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
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Chu et al.	2005	2157748
Chu et al.	2005	2157748
Chu et al.	2005	2157748
Chu et al.	2005	2157748
Chu et al.	2005	2157748
Chu et al.	2005	2157748
Franklin et al.	2005	2159856
Franklin et al.	2005	2159856
Muthuvel et al.	2006	2159859
Muthuvel et al.	2006	2159859
Donahue et al.	2002	2160093
Donahue et al.	2002	2160093
Donahue et al.	2002	2160093
Sridhar et al.	2004	2162224
Sridhar et al.	2004	2162224

testes weight, epididymis weight

sperm function

cholesterolhepatic microsomal enzymesliver lesions (incidence and severity), liver morphologyliver weightsserum alkaline phosphatase

cholesterolhepatic microsomal enzymesliver lesions (incidence and severity), liver morphologyliver weightsserum alkaline phosphatase

cholesterolhepatic microsomal enzymesliver lesions (incidence and severity), liver morphologyliver weightsserum alkaline phosphatase

cholesterolhepatic microsomal enzymesliver lesions (incidence and severity), liver morphologyliver weightsserum alkaline phosphatase

cholesterolhepatic microsomal enzymesliver lesions (incidence and severity), liver morphologyliver weightsserum alkaline phosphatase

hepatic ironliver porphyrins

hepatic ironliver porphyrins

hypothalamus weight

serum LH, FSH

offspring mortality

copulation behavior

time to pregnancy (sperm positive vaginal smear)

ventral prostatic weight

serum testosterone and estradiol

Reproductive organ size/weight, male	Reproductive
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Sperm/semen parameters	Reproductive
Cholesterol	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Serum Biomarkers of Liver Health & Function	Hepatobiliary
Micronutrients	Hepatobiliary
Porphyrins	Hepatobiliary

Brain-histological, structural, morphological	Nervous System
Sex hormone levels, male	Reproductive

Offspring mortality	Developmental
Sexual behavior	Nervous System

Time-to-pregnancy and couple fertility	Reproductive
Reproductive organ size/weight, male	Reproductive
Sex hormone levels, male	Reproductive

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Rat	Oral-cookie
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Rat	Oral-cookie
Rat	Oral-cookie
Rat	Oral-cookie
Rat	Oral-cookie
Rat	Oral-cookie
Rat	Oral-cookie
Mouse	Injection-ip
Mouse	Injection-ip

Rat	Injection-ip
Rat	Injection-ip

Rat	Oral-diet
Rat	Oral-diet

Rat	Oral-diet
Rat	Injection-ip

Rat	Injection-ip
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Secondary	
Secondary	

Primary	90
Primary	90
Secondary	
Secondary	
Secondary	
Primary	90
Primary	90

N/A	15	N/A
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N/A

N/A	2
-----	---

N/A	2
-----	---

N/A	1.25	N/A
-----	------	-----

1.25	25	25
------	----	----

N/A	1.25	1.25
-----	------	------

N/A	2
-----	---

N/A	2
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Rat dams dosed with 15 mg/kg-day from GD 1 - PND 23. Litters culled to 8 pups at PND 4; use default litter size. LOAEL based on significantly decreased absolute testis weight in F1 pups at PND 35 (Table 1).

Rat dams dosed with 15 mg/kg-day from GD 1 - PND 23. Litters culled to 8 pups at PND 4. Text says no effect on sperm function in testis homogenates of F1 pups.

Adult male rats (90 d of age) were injected with 2 mg/kg-day ip for 30 d. LOAEL is based on altered hypothalamus weight (Table 1).

Adult male rats were injected with 2 mg/kg-day ip for 30 days. LOAEL is based on decreased LH and FSH at necropsy (Figure 2).

Rat dams were dosed with 1.25 or 25 ppm beginning at GD1. F1 rats were exposed continuously until F2 mating at 1 year of age. Litter size was not possible to ascertain because no litters were produced; use default litter size. Offspring mortality occurred by GD11.

Rat dams were dosed with 1.25 or 25 ppm beginning at GD1. Litters were culled to 8 at PND3. F1 rats were removed from maternal cages at PND 30 and were continued on the maternal diet until about 1 year of age, and then a mating trial was conducted.

Rat dams were dosed with 1.25 or 25 ppm beginning at GD1. Litters were culled to 8 at PND3; use default litter size. F1 rats were removed from maternal cages at PND 30 and were continued on the maternal diet until about 1 year of age, and then a mating trial was conducted. LOAEL based on significantly increased time to presence of sperm in vaginal smear (Figure 1).

Adult male rats were dosed with 2 mg/kg-day for 30 days. LOAEL based on significantly decreased absolute ventral prostate weight (Table 1).

Adult male rats were dosed with 2 mg/kg-day for 30 days. LOAEL based on significantly decreased serum estradiol and testosterone at necropsy (Table 2).

22	0.9	0.094	0.154	10	21
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22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
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Kim et al.	2001	2165827
Kim et al.	2001	2165827
Kim et al.	2001	2165827
Kim	2001	2166250
Kim	2001	2166250
Kim	2001	2166250
Mochizuki et al.	2001	2166306
Mochizuki et al.	2001	2166306
Mochizuki et al.	2001	2166306
Hitomi and Yoshida	1991	2166444
Hitomi and Yoshida	1991	2166444
Hitomi and Yoshida	1991	2166444
Hitomi and Yoshida	1989	2166445
Hitomi and Yoshida	1989	2166445
Hitomi and Yoshida	1989	2166445
Hitomi and Yoshida	1989	2166445
Hitomi and Yoshida	1989	2166445

testis histopathology

testis weight

serum testosterone, serum LH

sertoli cell number

testis weights

sperm production

hepatic gene expression of apo A-I, CYP7A1, and malic enzymeliver lipidsliver weight (relative)

hepatic gene expression of apo A-I, CYP7A1, and malic enzymeliver lipidsliver weight (relative)

hepatic gene expression of apo A-I, CYP7A1, and malic enzymeliver lipidsliver weight (relative)

activities of aminopyrine N-demethylase, 7-ethoxycoumarin O-deethylase, aniline hydroxylase, glucose-6-phosphate deh

activities of aminopyrine N-demethylase, 7-ethoxycoumarin O-deethylase, aniline hydroxylase, glucose-6-phosphate deh

activities of aminopyrine N-demethylase, 7-ethoxycoumarin O-deethylase, aniline hydroxylase, glucose-6-phosphate deh

fecal bile acidsliver cholesterol, plasma cholesterolmicrosomal enzyme activity (HMG-CoA)liver total lipidsliver weight

fecal bile acidsliver cholesterol, plasma cholesterolmicrosomal enzyme activity (HMG-CoA)liver total lipidsliver weight

fecal bile acidsliver cholesterol, plasma cholesterolmicrosomal enzyme activity (HMG-CoA)liver total lipidsliver weight

fecal bile acidsliver cholesterol, plasma cholesterolmicrosomal enzyme activity (HMG-CoA)liver total lipidsliver weight

fecal bile acidsliver cholesterol, plasma cholesterolmicrosomal enzyme activity (HMG-CoA)liver total lipidsliver weight

Reproductive organ histopathology, male	Reproductive
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Reproductive organ size/weight, male	Reproductive
Sex hormone levels, male	Reproductive

Reproductive organ histopathology, male	Reproductive
Reproductive organ size/weight, male	Reproductive

Sperm/semen parameters	Reproductive
Liver Enzyme Induction	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Micronutrients	Hepatobiliary
Bile Acid Content/Excretion	Hepatobiliary
Cholesterol	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary

Aroclor 1242

Aroclor 1242

Aroclor 1242

Aroclor 1242

Aroclor 1242

Aroclor 1242

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1248

Aroclor 1248

Aroclor 1248

Aroclor 1248

Aroclor 1248

Aroclor 1248

Aroclor 1248

Aroclor 1248

Rat	Injection-sc
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Rat	Injection-sc
Rat	Injection-sc

Rat	Injection-sc
Rat	Injection-sc

Rat	Injection-sc
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet

Secondary

Secondary

Secondary

Secondary

Secondary

Secondary

		4
		4
		4
		7
		7
		7

22	43 N/A	N/A	21

22	43 N/A	N/A	21
22	43 N/A	N/A	21

22	43 N/A	N/A	21
22	43 N/A	N/A	21

22	43 N/A	N/A	21

N/A	0.0065	N/A
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0.0065	0.065	N/A
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N/A	0.0065	N/A
-----	--------	-----

N/A	See notes	N/A
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N/A	See notes	N/A
-----	-----------	-----

N/A	See notes	N/A
-----	-----------	-----

Rat dams injected 2x/week from parturition until weaning (PND21); F1 exposed via lactation
0, 8, 80 µg/dam-day; average weight of a dam reported to be 350 g
After parturition, litter sizes were adjusted to 3-4 pups per mother

Rat dams injected 2x/week from parturition until weaning (PND21); F1 exposed via lactation
0, 8, 80 µg/dam-day; average weight of a dam reported to be 350 g
After parturition, litter sizes were adjusted to 3-4 pups per mother

Rat dams injected 2x/week from parturition until weaning (PND21); F1 exposed via lactation
0, 8, 80 µg/dam-day; average weight of a dam reported to be 350 g
After parturition, litter sizes were adjusted to 3-4 pups per mother

Rat dams injected daily from parturition until weaning (PND 21); F1 exposed via lactation
0, 0.8, 1.6 mg/dam
LOAEL is 0.8 µg/dam; not recorded in LOAEL column because the dose is not in mg/kg-day
After birth, litter size was adjusted to 5-7

Dams injected daily from parturition until weaning (PND 21); F1 exposed via lactation
0, 0.8, 1.6 mg/dam
LOAEL is 0.8 µg/dam; not recorded in LOAEL column because the dose is not in mg/kg-day
After birth, litter size was adjusted to 5-7

Dams injected daily from parturition until weaning (PND 21); F1 exposed via lactation
0, 0.8, 1.6 mg/dam
LOAEL is 0.8 µg/dam; not recorded in LOAEL column because the dose is not in mg/kg-day
After birth, litter size was adjusted to 5-7

22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
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22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

Horio et al.	1987	2166872
Horio et al.	1987	2166872
Horio et al.	1987	2166872
Horio et al.	1987	2166872
Horio et al.	1989	2166875
Horio et al.	1989	2166875
Horio et al.	1989	2166875
Horio et al.	1989	2166875
Horio et al.	1989	2166875
Horio et al.	1989	2166875
Mochizuki et al.	2000	2166976
Mochizuki et al.	2000	2166976
Mochizuki et al.	2000	2166976
Mochizuki et al.	2000	2166976
Itokawa et al.	1976	2167868
Itokawa et al.	1976	2167868
Itokawa et al.	1976	2167868
Itokawa et al.	1976	2167868
Itokawa et al.	1976	2167868
Mochizuki et al.	1998	2168260
Mochizuki et al.	1998	2168260
Mochizuki et al.	1998	2168260
Johnstone et al.	1974	2168662
Johnstone et al.	1974	2168662
Kato et al.	1978	2169479
Kato et al.	1978	2169479
Kato et al.	1978	2169479
Kato et al.	1978	2169479
Kato et al.	1978	2169479
Kato et al.	1980	2169480
Kato et al.	1980	2169480
Kato et al.	1980	2169480
Kato et al.	1980	2169480
Kato et al.	1989	2169481
Kato et al.	1989	2169481
Kimura et al.	1976	2170282
Kimura et al.	1976	2170282
Kosinova et al.	1985	2170997
Kosinova et al.	1985	2170997
Oda et al.	1991	2172265
Oda et al.	1991	2172265
Nath et al.	1991	2172517
Nath et al.	1991	2172517
Fanini et al.	1990	2172957
Fanini et al.	1990	2172957
Fanini et al.	1990	2172957

serum concentration of cholesterol, serum concentration of HDL-cholesterol, the ratio of HDL-cholesterol to total cholesterol

serum concentration of cholesterol, serum concentration of HDL-cholesterol, the ratio of HDL-cholesterol to total cholesterol

serum concentration of cholesterol, serum concentration of HDL-cholesterol, the ratio of HDL-cholesterol to total cholesterol

serum concentration of cholesterol, serum concentration of HDL-cholesterol, the ratio of HDL-cholesterol to total cholesterol

fecal excretion of bile acidsliver cholesterol, serum cholesterolhepatic cholesterol 7a-hydroxylase activity, cytochrome P-450

fecal excretion of bile acidsliver cholesterol, serum cholesterolhepatic cholesterol 7a-hydroxylase activity, cytochrome P-450

fecal excretion of bile acidsliver cholesterol, serum cholesterolhepatic cholesterol 7a-hydroxylase activity, cytochrome P-450

fecal excretion of bile acidsliver cholesterol, serum cholesterolhepatic cholesterol 7a-hydroxylase activity, cytochrome P-450

fecal excretion of bile acidsliver cholesterol, serum cholesterolhepatic cholesterol 7a-hydroxylase activity, cytochrome P-450

cytochrome P-450, liver cytochrome b5liver lipidsliver weight (relative)liver ascorbic acid levels

cytochrome P-450, liver cytochrome b5liver lipidsliver weight (relative)liver ascorbic acid levels

cytochrome P-450, liver cytochrome b5liver lipidsliver weight (relative)liver ascorbic acid levels

cytochrome P-450, liver cytochrome b5liver lipidsliver weight (relative)liver ascorbic acid levels

cholesterol levels in liveraniline hydroxylase activityliver morphology, ceroid pigmentation in liver, liver histopathology

cholesterol levels in liveraniline hydroxylase activityliver morphology, ceroid pigmentation in liver, liver histopathology

cholesterol levels in liveraniline hydroxylase activityliver morphology, ceroid pigmentation in liver, liver histopathology

cholesterol levels in liveraniline hydroxylase activityliver morphology, ceroid pigmentation in liver, liver histopathology

cholesterol levels in liveraniline hydroxylase activityliver morphology, ceroid pigmentation in liver, liver histopathology

cytochrome P-450, cytochrome b5serum lipids, liver lipidsrelative liver weight

cytochrome P-450, cytochrome b5serum lipids, liver lipidsrelative liver weight

cytochrome P-450, cytochrome b5serum lipids, liver lipidsrelative liver weight

hepatic microsomal protein content, pentobarbital sleeping times, in vitro assays of hepatic microsomal O-demethylase,

hepatic microsomal protein content, pentobarbital sleeping times, in vitro assays of hepatic microsomal O-demethylase,

cholesterolliver enzyme inductionliver lipidsliver weightliver retinoids

cholesterolliver enzyme inductionliver lipidsliver weightliver retinoids

cholesterolliver enzyme inductionliver lipidsliver weightliver retinoids

cholesterolliver enzyme inductionliver lipidsliver weightliver retinoids

cholesterolliver enzyme inductionliver lipidsliver weightliver retinoids

liver cholesterol and relationship between serum and liver cholesterolliver aminopyrine demethylase, liver microsomal p

liver cholesterol and relationship between serum and liver cholesterolliver aminopyrine demethylase, liver microsomal p

liver cholesterol and relationship between serum and liver cholesterolliver aminopyrine demethylase, liver microsomal p

liver cholesterol and relationship between serum and liver cholesterolliver aminopyrine demethylase, liver microsomal p

fractions of chylomicrons/very-low-density lipoproteins (VLDL) and high-density lipoproteins (HDL), serum cholesterol an

fractions of chylomicrons/very-low-density lipoproteins (VLDL) and high-density lipoproteins (HDL), serum cholesterol an

hepatic lesions, nodular hyperplasia, cholangiofibrosis, fatty degenerationliver weight

hepatic lesions, nodular hyperplasia, cholangiofibrosis, fatty degenerationliver weight

liver enzymesliver weight

liver enzymesliver weight

cholesterolliver weight

cholesterolliver weight

liver DNA thymidine incorporationabsolute and relative liver weights

liver DNA thymidine incorporationabsolute and relative liver weights

spontaneous motor activity

traction, rotarod

exploratory activity

Cholesterol	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Micronutrients	Hepatobiliary
Bile Acid Content/Excretion	Hepatobiliary
Cholesterol	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Micronutrients	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Micronutrients	Hepatobiliary
Cholesterol	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Cholesterol	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Micronutrients	Hepatobiliary
Cholesterol	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Micronutrients	Hepatobiliary
Cholesterol	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Cholesterol	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Liver Cell Proliferation	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Activity level	Nervous System
Motor function	Nervous System
Cognitive function	Nervous System

Aroclor 1248
Aroclor 1248
Aroclor 1248
Aroclor 1248
Aroclor 1248
Aroclor 1248
Aroclor 1248
Aroclor 1248
Aroclor 1248
Aroclor 1254
Aroclor 1254
Aroclor 1254
Aroclor 1254
Kanechlor 500
Kanechlor 500
Kanechlor 500
Kanechlor 500
Kanechlor 500
Aroclor 1248
Aroclor 1248
Aroclor 1248
Aroclor 1254Aroclor 1260
Aroclor 1254Aroclor 1260
Aroclor 1248
Aroclor 1248
Aroclor 1248
Aroclor 1248
Aroclor 1248
Aroclor 1242
Aroclor 1242
Aroclor 1242
Aroclor 1242
Aroclor 1248
Aroclor 1248
Kanechlor 400
Kanechlor 400
Delor 105
Delor 105
Aroclor 1248
Aroclor 1248
Aroclor 1254
Aroclor 1254
Fenclor 54
Fenclor 54
Fenclor 54





Animal age NR; 25±5 g male & female; assume 90 d

Fanini et al.	1990	2172957
Fanini et al.	1990	2172957
Oda et al.	1989	2173181
Oda et al.	1989	2173181
Oda et al.	1989	2173181
Lipsky et al.	1978	2173571
Lipsky et al.	1978	2173571
Lipsky et al.	1978	2173571
Madej et al.	1992	2174795
Nakagawa et al.	1986	2174826
Nakagawa et al.	1986	2174826
Nakagawa et al.	1986	2174826
Narbonne et al.	1984	2175650
Mehlman et al.	1975	2176144
Mehlman et al.	1975	2176144
Mehlman et al.	1975	2176144
Mehlman et al.	1974	2176146
Mehlman et al.	1974	2176146
Merson and Kirkpatrick	1976	2176345
Merson and Kirkpatrick	1976	2176345
Quazi et al.	1983	2176364
Quazi et al.	1983	2176364
Quazi et al.	1983	2176364
Quazi et al.	1983	2176364
Horio and Yoshida	1982	2176910
Horio and Yoshida	1982	2176910
Horio and Yoshida	1982	2176910
Mochizuki et al.	1992	2176964
Mochizuki et al.	1992	2176964
Mochizuki et al.	1992	2176964
Mochizuki et al.	1992	2176964
Narbonne	1980	2177631
Yagi and Itokawa	1980	2177746
Yagi and Itokawa	1980	2177746

mounting

aggressive behavior, social activity, indifference

liver cholesterol/liver microsome protein and activity (3-hydroxy-3-methylglutaryl coenzyme A reductase and cholesterol 7

liver cholesterol/liver microsome protein and activity (3-hydroxy-3-methylglutaryl coenzyme A reductase and cholesterol 7

liver cholesterol/liver microsome protein and activity (3-hydroxy-3-methylglutaryl coenzyme A reductase and cholesterol 7

liver MFOSelectron microscopyliver weight

liver MFOSelectron microscopyliver weight

liver MFOSelectron microscopyliver weight

urinary excretion of oestrone sulfate

bile contentliver cholesterol/proteinliver cytochrome P450 levels

bile contentliver cholesterol/proteinliver cytochrome P450 levels

bile contentliver cholesterol/proteinliver cytochrome P450 levels

drug metabolizing enzyme, cytochrome P-450

liver enzyme activity (phosphoenolpyruvate carboxykinase (PEPck) in normal liver and the activities of pyruvate carboxylase

liver enzyme activity (phosphoenolpyruvate carboxykinase (PEPck) in normal liver and the activities of pyruvate carboxylase

liver enzyme activity (phosphoenolpyruvate carboxykinase (PEPck) in normal liver and the activities of pyruvate carboxylase

liver gluconeogenic enzyme activitiesliver weight

liver gluconeogenic enzyme activitiesliver weight

litter size

pairs having at least one or two litters, total litters, mean number of litters for all pairs begun on experiment

cholesterol/liver lipidsliver weightliver ascorbic acid

cholesterol/liver lipidsliver weightliver ascorbic acid

cholesterol/liver lipidsliver weightliver ascorbic acid

cholesterol/liver lipidsliver weightliver ascorbic acid

enzyme activity (hepatic UDPglucose dehydrogenase and L-gulonolactone oxidase)liver weighttissue level of ascorbic acid

enzyme activity (hepatic UDPglucose dehydrogenase and L-gulonolactone oxidase)liver weighttissue level of ascorbic acid

enzyme activity (hepatic UDPglucose dehydrogenase and L-gulonolactone oxidase)liver weighttissue level of ascorbic acid

liver aniline hydroxylase, liver aminopyrine N-demethylase activityliver lipidsliver weight (relative)liver ascorbic acid level

liver aniline hydroxylase, liver aminopyrine N-demethylase activityliver lipidsliver weight (relative)liver ascorbic acid level

liver aniline hydroxylase, liver aminopyrine N-demethylase activityliver lipidsliver weight (relative)liver ascorbic acid level

liver aniline hydroxylase, liver aminopyrine N-demethylase activityliver lipidsliver weight (relative)liver ascorbic acid level

liver microsomal protein levels, aminopyrine N-demethylase activity, aniline hydroxylase activity, cytochrome b5 activity

liver and serum levels of cholesteroltriglyceride, nonesterified fatty acid, phospholipid, total liver lipidsliver weight

liver and serum levels of cholesteroltriglyceride, nonesterified fatty acid, phospholipid, total liver lipidsliver weight

Sexual behavior	Nervous System
Social behavior/development	Nervous System
Cholesterol	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary

Sex hormone levels, female	Reproductive
Bile Acid Content/Excretion	Hepatobiliary
Cholesterol	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary

Pregnancy/conception rate	Reproductive
Time-to-pregnancy and couple fertility	Reproductive
Cholesterol	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Micronutrients	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Micronutrients	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Micronutrients	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Cholesterol	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary

Fenclor 54

Fenclor 54

Aroclor 1248

Aroclor 1248

Aroclor 1248

Aroclor 1254

Aroclor 1254

Aroclor 1254

Clophen A50

Kanechlor 400

Kanechlor 400

Kanechlor 400

Phenochlor DP6

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1248

Aroclor 1248

Aroclor 1248

Aroclor 1248

Aroclor 1248

Aroclor 1248

Aroclor 1248

PCBs

PCBs

PCBs

PCBs

Phenochlor DP6

Kanechlor 500

Kanechlor 500

Mouse	Oral-diet
Mouse	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Injection-ip
Rat	Injection-ip
Rat	Injection-ip
CHECK	CHECK
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Mouse	Oral-diet
Mouse	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet

Primary 90

Primary 90

Primary

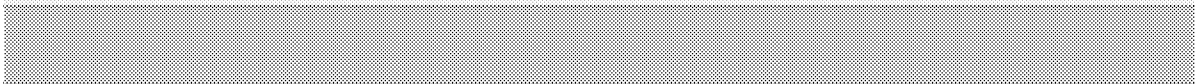
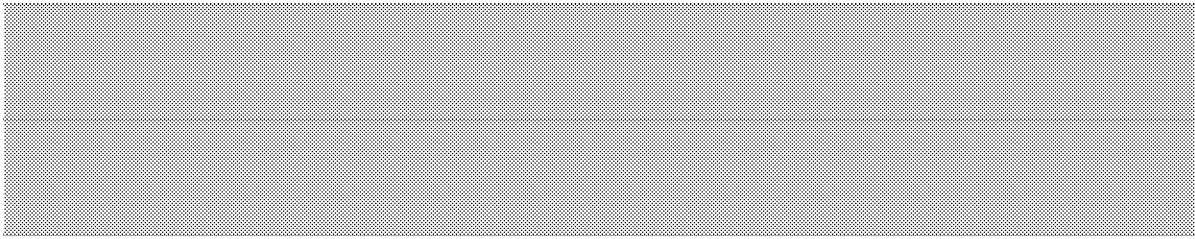
Primary

Primary 50

21

21

60



Animal age NR; 25±5 g male; assume 90 d

Authors reported that dietary doses of 1, 10, and 100 ppm were equivalent to 0.06, 0.6, and 6 mg/kg-d

Animal age NR; 25±5 g male; assume 90 d

Authors reported that dietary doses of 1, 10, and 100 ppm were equivalent to 0.06, 0.6, and 6 mg/kg-d

Mating pairs of mice were dosed with 200 ppm for 60 days; dosing began immediately upon pairing. There was no effect on litter size of all litters produced in this time period (Table 1).

Mating pairs of mice were dosed with 200 ppm for 60 days; dosing began immediately upon pairing. LOAEL based on the decrease in pairs having at least one litter or two litters and decreased total litters in 60 days. Starting age reported as "females and males at sexual maturity"; assume 50 d.

18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

CHECK	0.9	CHECK	CHECK	CHECK	CHECK
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

Adequate

Good

Adequate

Adequate

Good

Adequate

Yagi and Itokawa	1980	2177746
Narbonne	1979	2178150
Narbonne	1979	2178150
Müller et al.	1978	2178597
Müller et al.	1978	2178597
Ishikawa et al.	1978	2178872
Ishikawa et al.	1978	2178872
Ishikawa et al.	1978	2178872
Schmoldt et al.	1977	2179041
Schmoldt et al.	1977	2179041
Schmoldt et al.	1977	2179041
Schmoldt et al.	1977	2179041
Schmoldt et al.	1977	2179041
Schmoldt et al.	1977	2179041
Schmoldt et al.	1977	2179041
Schmoldt et al.	1977	2179041
Sanders and Kirkpatrick	1977	2179086
Sanders and Kirkpatrick	1977	2179086
Sanders and Kirkpatrick	1977	2179086
Sanders and Kirkpatrick	1977	2179086
Sanders et al.	1977	2179130

liver and serum levels of cholesteroltriglyceride, nonesterified fatty acid, phospholipid, total liver lipidsliver weight
microsomal protein contentliver weight
microsomal protein contentliver weight
ovulation
levels of luteinizing hormone, follicle-stimulating hormone, and estrogen

ovulation
levels of luteinizing hormone, follicle-stimulating hormone, and estrogen
microsomal protein contentliver weight, liver to body weight ratioplasmal levels of SGOT, SGTP, bilirubin
microsomal protein contentliver weight, liver to body weight ratioplasmal levels of SGOT, SGTP, bilirubin
microsomal protein contentliver weight, liver to body weight ratioplasmal levels of SGOT, SGTP, bilirubin

brain weight
total cholesterolmicrosomal protein, cytochrome P450 and b5 content, NADPH-cyt. c reductase, p-nitroanisoledemethyl:
total cholesterolmicrosomal protein, cytochrome P450 and b5 content, NADPH-cyt. c reductase, p-nitroanisoledemethyl:
total cholesterolmicrosomal protein, cytochrome P450 and b5 content, NADPH-cyt. c reductase, p-nitroanisoledemethyl:
total cholesterolmicrosomal protein, cytochrome P450 and b5 content, NADPH-cyt. c reductase, p-nitroanisoledemethyl:
total cholesterolmicrosomal protein, cytochrome P450 and b5 content, NADPH-cyt. c reductase, p-nitroanisoledemethyl:
total cholesterolmicrosomal protein, cytochrome P450 and b5 content, NADPH-cyt. c reductase, p-nitroanisoledemethyl:

% of females exhibiting an estrual smear
ovarian and uterine weights
liver microsomal enzyme activityliver weight
liver microsomal enzyme activityliver weight

preputial gland, seminal vesicle and left testis weight

Liver Weight/Hepatomegaly	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Ovulation	Reproductive

Sex hormone levels, female	Reproductive
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Serum Biomarkers of Liver Health & Function	Hepatobiliary

Brain-histological, structural, morphological	Nervous System
Cholesterol	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Porphyrins	Hepatobiliary
Serum Biomarkers of Liver Health & Function	Hepatobiliary

Estrous/menstrual cycle characteristics	Reproductive
Reproductive organ size/weight, female	Reproductive
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary

Reproductive organ size/weight, male	Reproductive
--------------------------------------	--------------

Kanechlor 500

Phenochlor DP6

Phenochlor DP6

Clophen A30

Clophen A30

Aroclor 1254

Aroclor 1254

Aroclor 1254

Clophen A30

Clophen A30

Clophen A30

Clophen A30

Clophen A30

Clophen A30

Clophen A30

Clophen A30

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
CHECK	CHECK

CHECK	CHECK
Rat	Injection-ip
Rat	Injection-ip
Rat	Injection-ip

Rat	Oral-diet
rat	Oral-diet
rat	Oral-diet
rat	Oral-diet
rat	Oral-diet
rat	Oral-diet
rat	Oral-diet
rat	Oral-diet

Mouse	Oral-diet
Mouse	Oral-diet
Mouse	Oral-diet
Mouse	Oral-diet

Mouse	Oral-diet
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Primary

Primary

Primary

Primary

Primary

Primary

		N/A		
		N/A		
		N/A		
		N/A		

Adult male rats exposed for 12 wk; age NR (180 g). No changes in brain weight were observed (Table 1).

Adult female mice (between ages 100-180 days) were fed 0, 25, or 100 ppm (ad libitum) or 0, 36, or 143 ppm (70% ad libitum) for 3 weeks. Authors report PCB intake in mg/kg-day based on food consumption (Table 1). Vaginal smears evaluated during the last 6 days of the exposure. There was no significant effect of PCB treatment on estrual smears (Table 4).

Adult female mice fed 0, 25, or 100 ppm (ad libitum) or 0, 36, or 143 ppm (70% ad libitum). Authors report PCB intake in mg/kg-day based on food consumption (Table 1). There was no significant effect of PCB treatment on ovarian and uterine weights (Table 2).

Adult male mice (115-130 days old) were dosed with 0, 50, or 200 ppm (ad libitum) or 0, 100, or 400 ppm (50% ad libitum) for 15 days. Reproductive organ weights were not affected by PCB treatment (Table 3).

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
CHECK	0.9	CHECK	CHECK	CHECK	CHECK

CHECK	0.9	CHECK	CHECK	CHECK	CHECK
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21

18	0.9	0.229	0.264	6	21
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Sanders et al.	1977	2179130
Sanders et al.	1977	2179130
Sanders et al.	1977	2179130
Oda et al.	1994	2179169
Oda et al.	1994	2179169
Oda et al.	1994	2179169
Yagi et al.	1976	2179349
Yagi et al.	1976	2179349
Yagi et al.	1976	2179349
Kasza et al.	1976	2179492
Kasza et al.	1976	2179492
Kasza et al.	1976	2179492
Kasza et al.	1976	2179492
Braunberg et al.	1976	2179493
Braunberg et al.	1976	2179493
Braunberg et al.	1976	2179493
Bastomsky and Murthy	1976	2179560
Allen et al.	1976	2179602
Allen et al.	1976	2179602
Allen et al.	1976	2179602
Allen et al.	1976	2179602
Allen et al.	1976	2179602
Allen et al.	1976	2179602
Allen et al.	1976	2179602
Allen et al.	1976	2179602
Allen et al.	1976	2179602

sperm number per mg testis

liver microsomal enzyme activityliver weight

liver microsomal enzyme activityliver weight

hepatic lipidshepatic weight

hepatic lipidshepatic weight

hepatic lipidshepatic weight

prominent dark brown pigmentationliver weightliver levels of sodium, magnesium, potassium, and calcium

prominent dark brown pigmentationliver weightliver levels of sodium, magnesium, potassium, and calcium

prominent dark brown pigmentationliver weightliver levels of sodium, magnesium, potassium, and calcium

coarse intracytoplasmic vacuolation, hypertrophic, proliferation of smooth-surfaced endoplasmic reticulumaccumulation

coarse intracytoplasmic vacuolation, hypertrophic, proliferation of smooth-surfaced endoplasmic reticulumaccumulation

coarse intracytoplasmic vacuolation, hypertrophic, proliferation of smooth-surfaced endoplasmic reticulumaccumulation

coarse intracytoplasmic vacuolation, hypertrophic, proliferation of smooth-surfaced endoplasmic reticulumaccumulation

liver histology (proliferation of smooth endoplasmic reticulum, cellular degeneration [full liver histopathology was report

liver histology (proliferation of smooth endoplasmic reticulum, cellular degeneration [full liver histopathology was report

liver histology (proliferation of smooth endoplasmic reticulum, cellular degeneration [full liver histopathology was report

liver weight

brain weight

brain weight

brain weight

testes weight

testes weight

testes weight

cholesteroliver histopathologyliver weights

cholesteroliver histopathologyliver weights

cholesteroliver histopathologyliver weights

Sperm/semen parameters	Reproductive
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Cholesterol	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Micronutrients	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Serum Biomarkers of Liver Health & Function	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary

Brain-histological, structural, morphological	Nervous System
Brain-histological, structural, morphological	Nervous System

Brain-histological, structural, morphological	Nervous System
Reproductive organ size/weight, male	Reproductive

Reproductive organ size/weight, male	Reproductive
Reproductive organ size/weight, male	Reproductive
Cholesterol	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1248

Aroclor 1248

Aroclor 1248

Kanechlor 500

Kanechlor 500

Kanechlor 500

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1242

Aroclor 1254

Aroclor 1262

Aroclor 1242

Aroclor 1254

Aroclor 1262

Aroclor 1242Aroclor 1254Aroclor 1262

Aroclor 1242Aroclor 1254Aroclor 1262

Aroclor 1242Aroclor 1254Aroclor 1262

Primary

122.5

Primary

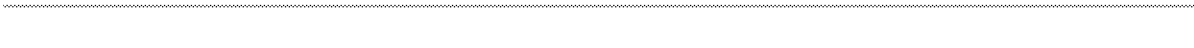
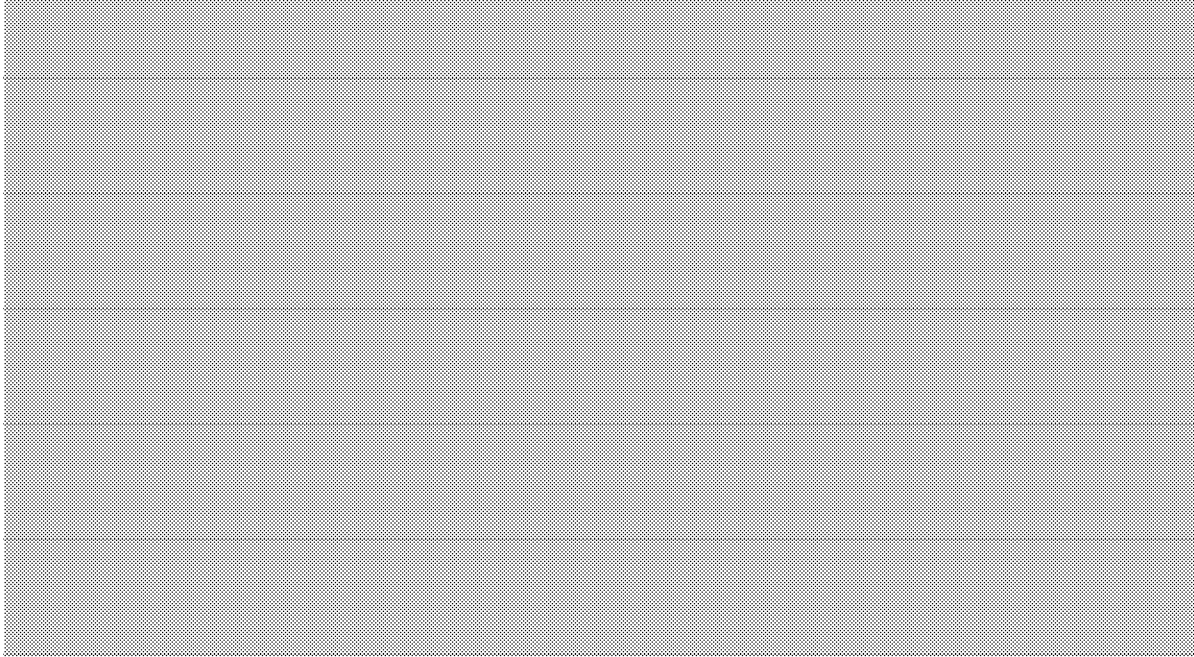
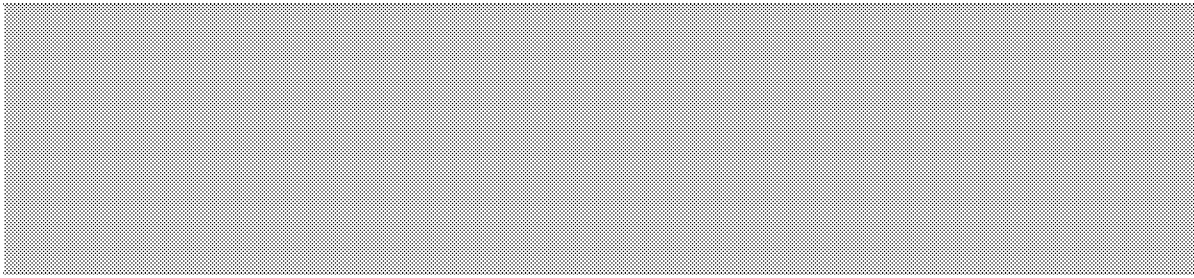
Primary

Primary

Primary

Primary

Primary



			3	50	200
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Adult male mice (115-130 days old) were dosed with 0, 50, or 200 ppm (ad libitum) or 0, 100, or 400 ppm (50% ad libitum) for 15 days. LOAEL based on decreased sperm/testis (Table 4). They say there was a significant effect but don't report the dose at which significance was observed; however, it appears that effects begin at 200 ppm.

Adult male rats were dosed with 100 ppm in diet for up to 52 weeks. Text states that there were no effects on organ (brain) weight.

Adult male rats were dosed with 100 ppm in diet for up to 52 weeks. Text states that there were no effects on organ (brain) weight.

Adult male rats were dosed with 100 ppm in diet for up to 52 weeks. Text states that there were no effects on organ (brain) weight.

Adult male rats were dosed with 100 ppm in diet for up to 52 weeks. Text states that there were no effects on organ (testes) weight.

Adult male rats were dosed with 100 ppm in diet for up to 52 weeks. Text states that there were no effects on organ (testes) weight.

Adult male rats were dosed with 100 ppm in diet for up to 52 weeks. Text states that there were no effects on organ (testes) weight.

Orberg and Kihlström	1973	2179659
Orberg and Kihlström	1973	2179659
Goldstein et al.	1975	2179842
Goldstein et al.	1975	2179842
Goldstein et al.	1975	2179842
Iverson et al.	1975	2179920
Iverson et al.	1975	2179920
Iverson et al.	1975	2179920
Bickers et al.	1975	2179927
Bickers et al.	1975	2179927
Sanders and Kirkpatrick	1975	2180027
Sanders and Kirkpatrick	1975	2180027
Sanders and Kirkpatrick	1975	2180027
Sanders and Kirkpatrick	1975	2180027
Itokawa et al.	1975	2180042
Itokawa et al.	1975	2180042
Itokawa et al.	1975	2180042
Itokawa et al.	1975	2180042
Itokawa et al.	1975	2180042
Itokawa et al.	1975	2180042
Itokawa et al.	1975	2180042
Itokawa et al.	1975	2180042
Hansell and Ecobichon	1974	2180274

number of estrous cycles during the 62 day monitoring period
of corpora lutea

number of estrous cycles during the 62 day monitoring period
of corpora lutea

liver enzymes, hepatic cytochrome P-450s, hepatic microsomal protein, delta amino levulenic acidliver weightliver porph
liver enzymes, hepatic cytochrome P-450s, hepatic microsomal protein, delta amino levulenic acidliver weightliver porph
liver enzymes, hepatic cytochrome P-450s, hepatic microsomal protein, delta amino levulenic acidliver weightliver porph
liver aniline hydroxylase, aminopyrene demethylase, cytochrome P450relative liver weightliver porphyrins
liver aniline hydroxylase, aminopyrene demethylase, cytochrome P450relative liver weightliver porphyrins
liver aniline hydroxylase, aminopyrene demethylase, cytochrome P450relative liver weightliver porphyrins
enzyme activity (aryl hydrocarbon hydroxylase, ethylmorphine N-demethylase, benzo(a)pyrene hydroxylase, cytochrome
enzyme activity (aryl hydrocarbon hydroxylase, ethylmorphine N-demethylase, benzo(a)pyrene hydroxylase, cytochrome

seminal vesicle weight, testis weights

sperm per mg testis and total sperm per testis

liver enzyme inductionliver weight

liver enzyme inductionliver weight

brain weight and histopathology

testis histopathology

relative testis weight

testis histopathology

relative testis weight

cholesterolliver aniline hydroxylaseliver histopathology, liver morphologyliver lipidsliver weight, liver weight ratio to bod
cholesterolliver aniline hydroxylaseliver histopathology, liver morphologyliver lipidsliver weight, liver weight ratio to bod
cholesterolliver aniline hydroxylaseliver histopathology, liver morphologyliver lipidsliver weight, liver weight ratio to bod
cholesterolliver aniline hydroxylaseliver histopathology, liver morphologyliver lipidsliver weight, liver weight ratio to bod
cholesterolliver aniline hydroxylaseliver histopathology, liver morphologyliver lipidsliver weight, liver weight ratio to bod
cholesterolliver aniline hydroxylaseliver histopathology, liver morphologyliver lipidsliver weight, liver weight ratio to bod
liver cell morphology, changes in hepatic smooth endoplasmic reticulumlipid droplets and microbodiesabsolute liver wei

Estrous/menstrual cycle characteristics	Reproductive
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Ovulation	Reproductive
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Porphyrins	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Porphyrins	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary

Reproductive organ size/weight, male	Reproductive
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Sperm/semen parameters	Reproductive
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary

Brain-histological, structural, morphological	Nervous System
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Reproductive organ histopathology, male	Reproductive
Reproductive organ size/weight, male	Reproductive
Cholesterol	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Serum Biomarkers of Liver Health & Function	Hepatobiliary
Liver Histopathology	Hepatobiliary

Clophen A60

Clophen A60

Aroclor 1016Aroclor 1242

Aroclor 1016Aroclor 1242

Aroclor 1016Aroclor 1242

Aroclor 1016Aroclor 1242

Aroclor 1016Aroclor 1242

Aroclor 1016Aroclor 1242

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Kanechlor 500

Kanechlor 500

Kanechlor 500

Kanechlor 500

Kanechlor 500

Kanechlor 500

Kanechlor 500

Kanechlor 500

Kanechlor 500

Aroclor 1254Aroclor 1260

Mouse	Oral-CHECK
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Mouse	Oral-CHECK
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-gavage
Rat	Oral-gavage
Rat	Oral-gavage
Rat	Dermal
Rat	Dermal

Mouse	Oral-diet
-------	-----------

Mouse	Oral-diet
Mouse	Oral-diet
Mouse	Oral-diet

Rat	Oral-diet
-----	-----------

Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Injection-ip

Primary

Primary

Primary

165

Primary

165

Primary

Primary

Primary

70-72

70-72

14

14

3091213

3091213

[illegible]

0, 0.025 mg

0, 0.025 mg

Adult male mice (age 145 - 185 days) dosed with 0, 100, 200, or 400 ppm in diet for 2 weeks. LOAEL based on significantly decreased paired seminal vesicle weight (Table 3).

Adult male mice (age 145 - 185 days) dosed with 0, 100, 200, or 400 ppm in diet for 2 weeks. LOAEL based on significantly decreased sperm/mg testis and total sperm/testis (Table 3).

Male rats (60g) exposed for up to 7 mo to 500 ppm via diet. Authors report food intake (17.3 g/d). A 2nd experiment was also conducted in male rats (150g) with doses ranging from 10-500 ppm. The duration of the 2nd experiment is not provided but is inferred to be 1 mo from the tables. It is not clear if brain weight and histology were evaluated in exp 2, but the results were NR. For exp 1: "No significant changes in tissue weight or histological appearance were observed in other tissues." (page 121)

18	0.9	0.229	0.264	6	21
----	-----	-------	-------	---	----

18	0.9	0.229	0.264	6	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

18	0.9	0.229	0.264	6	21
----	-----	-------	-------	---	----

18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21

22	0.9	0.094	0.154	10	21
----	-----	-------	-------	----	----

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

Hansell and Ecobichon	1974	2180274
Hansell and Ecobichon	1974	2180274
Orberg and Lundberg	1974	2180432
Orberg and Lundberg	1974	2180432
Orberg and Lundberg	1974	2180432
Kimbrough	1973	2180556
Kato et al.	1972	2181050
Kato et al.	1972	2181050
Kato et al.	1972	2181050
Kato et al.	1972	2181050
Inao	1970	2181226
Inao	1970	2181226
Quazi	1985	2181705
Quazi	1985	2181705
Quazi	1985	2181705
Suzuki	1980	2185504
Suzuki	1980	2185504
National Cancer Institute	1978	2192571
National Cancer Institute	1978	2192571
National Cancer Institute	1978	2192571
National Cancer Institute	1978	2192571
Severino et al.	1994	2192718
Severino et al.	1994	2192718
Severino et al.	1994	2192718
Kato	1981	2197761

liver cell morphology, changes in hepatic smooth endoplasmic reticulumlipid droplets and microbodiesabsolute liver wei
liver cell morphology, changes in hepatic smooth endoplasmic reticulumlipid droplets and microbodiesabsolute liver wei
seminal vesicle weight, testis weight
liver enzyme inductionliver weight
liver enzyme inductionliver weight
adenofibrosis, liver enlargement, fatty metamorphosis, accumulation of brown pigment in hepatic macrophages, presen
number of newborn
uterine histopathology
number of newborn
uterine histopathology
increased smooth endoplasmic reticulum and inhibition of mitochondria, and some degenerationliver-body weight ratios
increased smooth endoplasmic reticulum and inhibition of mitochondria, and some degenerationliver-body weight ratios
corticosterone-inactivating liver functionliver weight
corticosterone-inactivating liver functionliver weight
cholesteroltotal lipids, phospholipid, triglycerideliver weight
cholesteroltotal lipids, phospholipid, triglycerideliver weight
cholesteroltotal lipids, phospholipid, triglycerideliver weight
serum cholesterolliver enzyme induction
serum cholesterolliver enzyme induction

brain histopathology

uterine and ovarian histopathology

testes histopathology

liver histopathology

frequency of estrous during the 12 days pre-mating treatment period

litter size

frequency of estrous during the 12 days pre-mating treatment period

litter size

liver histopathology

cholesterollipidsliver weight

Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Reproductive organ size/weight, male	Reproductive
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Liver Histopathology	Hepatobiliary
Pregnancy/conception rate	Reproductive
Reproductive organ histopathology, female	Reproductive
Liver Histopathology	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Cholesterol	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Cholesterol	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary

Brain-histological, structural, morphological	Nervous System
Reproductive organ histopathology, female	Reproductive

Reproductive organ histopathology, male	Reproductive
Liver Histopathology	Hepatobiliary

Estrous/menstrual cycle characteristics	Reproductive
Pregnancy/conception rate	Reproductive
Liver Histopathology	Hepatobiliary
Cholesterol	Hepatobiliary

Aroclor 1254Aroclor 1260

Aroclor 1254Aroclor 1260

Clophen A60

Clophen A60

Clophen A60

Aroclor 1254

Kanechlor 400

Kanechlor 400

Kanechlor 400

Kanechlor 400

Kanechlor 400

Kanechlor 400

Aroclor 1248

Aroclor 1248

Aroclor 1248

Aroclor 1248

Aroclor 1248

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Fenclor 64

Fenclor 64

Fenclor 64

Aroclor 1248

Rat	Injection-ip
Rat	Injection-ip
Mouse	Oral-gavage
Mouse	Oral-gavage
Mouse	Oral-gavage
Rat	Oral-diet
Rat	Oral-gavage
Rat	Oral-gavage
Rat	Oral-gavage
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet

Rat	Oral-diet
Rat	Oral-diet

Rat	Oral-diet
Rat	Oral-diet

Rat	Oral-gavage
Rat	Oral-gavage
Rat	Oral-gavage
Rat	Oral-diet

Primary

Primary

Primary

Primary

Primary

Primary

Primary

Primary

28

21

21

1230

1230



[illegible]

0, 7mg/animal-day

Male and female rats (53 d of age) exposed to 25-100 ppm PCBs via diet for 104-105 wk. No evidence of treatment-related effects on brain tissues (Appendix tables and described in text).

Male and female rats (53 days old, see p. 24 of PDF) were dosed with 0, 25, 50, or 100 ppm for 104-105 weeks, and necropsied at the end of study for histopathological evaluation. There was no evidence of treatment-related effects on female reproductive tissues (Appendix tables and described in text).

Male and female rats (53 days old, see p. 24 of PDF) were dosed with 0, 25, 50, or 100 ppm for 104-105 weeks, and necropsied at the end of study for histopathological evaluation. There was no evidence of treatment-related effects on male reproductive tissues (Appendix tables and described in text).

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

Kato	1981	2197761
Kato	1981	2197761
Horio et al.	1981	2197814
Horio et al.	1981	2197814
Horio et al.	1981	2197814
Horio et al.	1981	2197814
Quazi et al.	1983	2198120
Quazi et al.	1983	2198120
Quazi et al.	1983	2198120
Quazi et al.	1984	2198216
Quazi et al.	1984	2198216
Quazi et al.	1984	2198216
Quazi et al.	1984	2198216
Jensen et al.	1977	2198965
Jensen et al.	1977	2198965
Jensen et al.	1977	2198965
Kiriyama et al.	1974	2199240
Kiriyama et al.	1974	2199240
Fujiwara	1977	2199440
Orberg et al.	1972	2199587
Hori et al.	1986	2199616
Hori et al.	1986	2199616
Hori et al.	1986	2199616
Hori et al.	1986	2199616
Kakela et al.	1999	2200060
Katayama et al.	1991	2200724
Katayama et al.	1991	2200724
Carter and Mercer	1983	2201028
Carter and Mercer	1983	2201028
Calandra	1976	2201050

cholesterol
lipids
liver weight
cholesterol
lipids
liver weight
cholesterol
aminopyrine N-demethylase activity, cytochrome P450 content
liver weight
ascorbic acid in urine and liver
cholesterol
aminopyrine N-demethylase activity, cytochrome P450 content
liver weight
ascorbic acid in urine and liver
cholesterol
aminopyrine N-demethylase activity, cytochrome P450 content
liver weight
ascorbic acid in urine and liver
cholesterol
triglyceride, lipids, phospholipid
liver weight
cholesterol
triglyceride, lipids, phospholipid
liver weight
cholesterol
triglyceride, lipids, phospholipid
liver weight
cholesterol
lipids, triglyceride, phospholipid
liver weight
urinary ascorbic acid
cholesterol
lipids, triglyceride, phospholipid
liver weight
urinary ascorbic acid
cholesterol
lipids, triglyceride, phospholipid
liver weight
urinary ascorbic acid
cholesterol
lipids, triglyceride, phospholipid
liver weight
urinary ascorbic acid
number of implantation sites per pregnant female, number of whelps born per pregnant female
delivering females, percent of mated
liver enzyme induction
relative liver weight
liver enzyme induction
relative liver weight
cholesterol
liver weight
cholesterol
liver weight
liver ascorbic acid, liver riboflavin, formation of ascorbic acid from D-glucuronolactone in liver homogenate, catabolism
c
length of the oestrous cycle
cholesterol
hepatic microsomal enzymes (cytochrome P-450, NADPH-cytochrome c reductase, -p-nitroanisole O-demethyl
cholesterol
hepatic microsomal enzymes (cytochrome P-450, NADPH-cytochrome c reductase, -p-nitroanisole O-demethyl
cholesterol
hepatic microsomal enzymes (cytochrome P-450, NADPH-cytochrome c reductase, -p-nitroanisole O-demethyl
cholesterol
hepatic microsomal enzymes (cytochrome P-450, NADPH-cytochrome c reductase, -p-nitroanisole O-demethyl
vitamin A and E
serum alpha-tocopherol
ascorbic acid in liver tissue
serum alpha-tocopherol
ascorbic acid in liver tissue
testis weight
liver weight
mating index

Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Cholesterol	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Micronutrients	Hepatobiliary
Cholesterol	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Cholesterol	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Micronutrients	Hepatobiliary
Pregnancy/conception rate	Reproductive
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Cholesterol	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Micronutrients	Hepatobiliary
Estrous/menstrual cycle characteristics	Reproductive
Cholesterol	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Serum Biomarkers of Liver Health & Function	Hepatobiliary
Micronutrients	Hepatobiliary
Cholesterol	Hepatobiliary
Micronutrients	Hepatobiliary
Reproductive organ size/weight, male	Reproductive
Liver Weight/Hepatomegaly	Hepatobiliary
Sexual behavior	Nervous System

Aroclor 1248
Aroclor 1248
PCBs
PCBs
PCBs
PCBs
Aroclor 1248
Aroclor 1248
Aroclor 1248
Aroclor 1248
Aroclor 1248
Aroclor 1248
Aroclor 1248
PCBs
PCBs
PCBs
Aroclor 1248
Aroclor 1248
Mixture: Kanechlors 300, 400, 500, 600
Clophen A60
Kanechlor 400
Kanechlor 400
Kanechlor 400
Kanechlor 400
Kanechlor 400
Aroclor 1242
PCB-48 (mixture)
PCB-48 (mixture)
Aroclor 1254
Aroclor 1254
Aroclor 1242

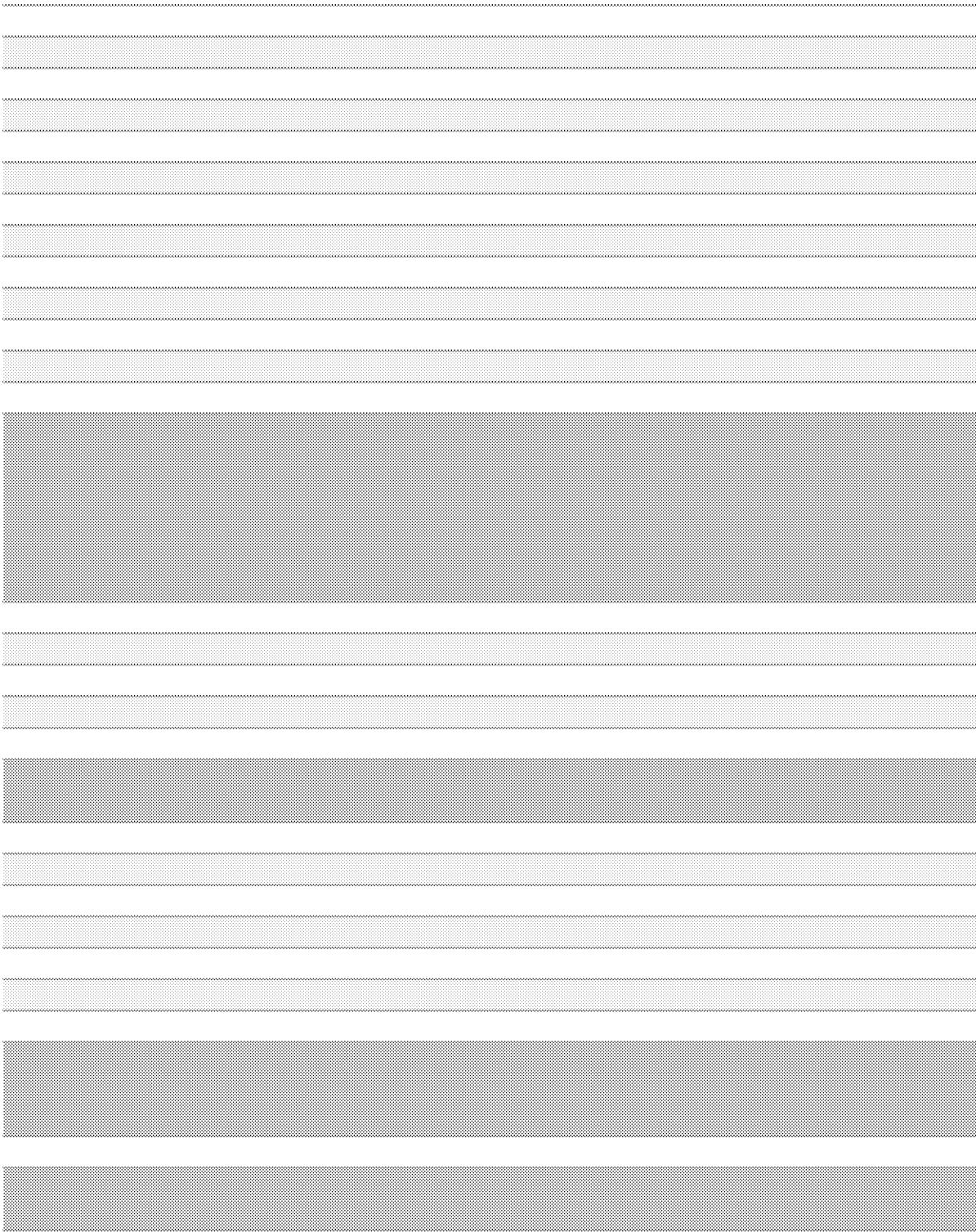
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Mink	Oral-diet
Mink	Oral-diet
Mink	Oral-diet
Rat	CHECK
Rat	CHECK
Rat	Oral-diet
CHECK	CHECK
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Mink	CHECK
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Rat	Oral-diet
Mouse	Injection-ip

Primary

Primary

Primary

Primary



Male weanling rats were dosed with 0-1400 ppm for 14 days. There was no effect on relative testis weight (Table IV).
(Absolute organ weights not reported.)

Aroclor 1242 administered as a single i.p. dose to males at 500 or 1000 mg/kg.

	22	0.9	0.094	0.154	10	21
	22	0.9	0.094	0.154	10	21
	22	0.9	0.094	0.154	10	21
	22	0.9	0.094	0.154	10	21
	22	0.9	0.094	0.154	10	21
	22	0.9	0.094	0.154	10	21
	22	0.9	0.094	0.154	10	21
	22	0.9	0.094	0.154	10	21
	22	0.9	0.094	0.154	10	21
	22	0.9	0.094	0.154	10	21
	22	0.9	0.094	0.154	10	21
	22	0.9	0.094	0.154	10	21
	22	0.9	0.094	0.154	10	21
	22	0.9	0.094	0.154	10	21
	22	0.9	0.094	0.154	10	21
	22	0.9	0.094	0.154	10	21
	52	0.9	0.312	0.066	5	56
	52	0.9	0.312	0.066	5	56
	52	0.9	0.312	0.066	5	56
	22	0.9	0.094	0.154	10	21
	22	0.9	0.094	0.154	10	21
	22	0.9	0.094	0.154	10	21
CHECK		0.9 CHECK	CHECK	CHECK	CHECK	
	22	0.9	0.094	0.154	10	21
	22	0.9	0.094	0.154	10	21
	22	0.9	0.094	0.154	10	21
	22	0.9	0.094	0.154	10	21
	52	0.9	0.312	0.066	5	56
	22	0.9	0.094	0.154	10	21
	22	0.9	0.094	0.154	10	21
	22	0.9	0.094	0.154	10	21
	22	0.9	0.094	0.154	10	21
	18	0.9	0.229	0.264	6	21

Calandra	1976	2201050
----------	------	---------

Calandra	1976	2201050
----------	------	---------

Calandra	1976	2201050
----------	------	---------

Calandra	1976	2201050
----------	------	---------

Calandra	1976	2201050
----------	------	---------

Calandra	1976	2201050
----------	------	---------

Calandra	1976	2201050
----------	------	---------

Calandra	1976	2201050
----------	------	---------

mating index

mating index

mating index

mating index

mating index

litter size, frequency of pregnancy

litter size, frequency of pregnancy

litter size, frequency of pregnancy

Sexual behavior	Nervous System
Sexual behavior	Nervous System

Sexual behavior	Nervous System
Sexual behavior	Nervous System

Sexual behavior	Nervous System
Pregnancy/conception rate	Reproductive
Pregnancy/conception rate	Reproductive
Pregnancy/conception rate	Reproductive

Aroclor 1242

Aroclor 1254

Aroclor 1254

Aroclor 1260

Aroclor 1260

Aroclor 1242

Aroclor 1242

Aroclor 1254

.....

Rat	Oral-diet
Mouse	Injection-ip

Rat	Oral-diet
Mouse	Injection-ip

Rat	Oral-diet
Mouse	Injection-ip

Rat	Oral-diet
Mouse	Injection-ip

Secondary	
Primary	
Secondary	
Primary	
Secondary	
Primary	
Secondary	
Primary	

.....

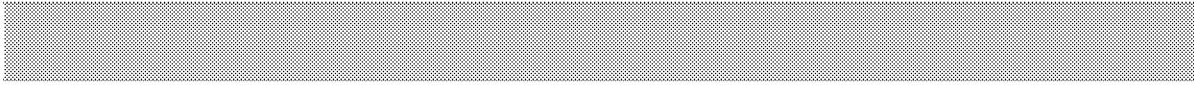
-78

43

44

78

21



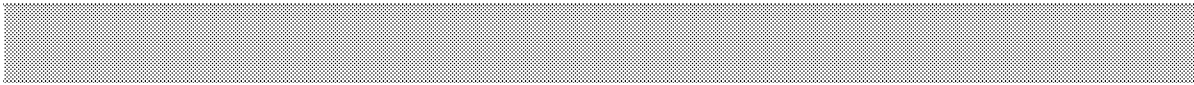
-78

43

44

78

21



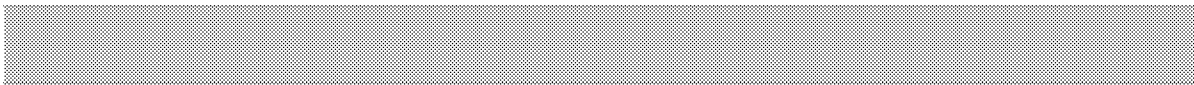
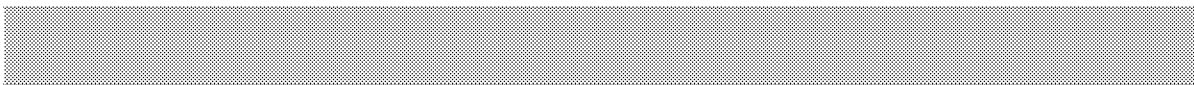
-78

43

44

78

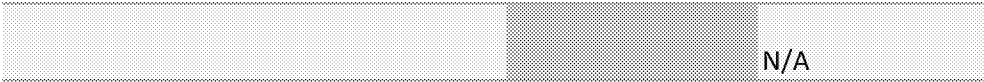
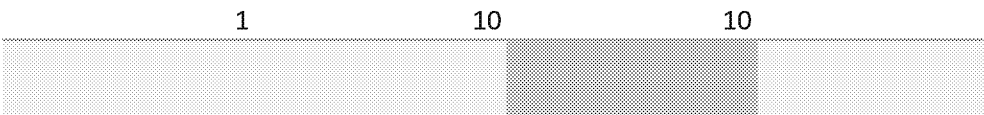
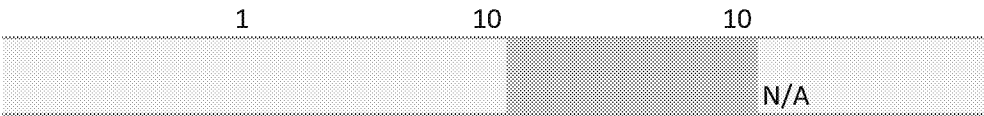
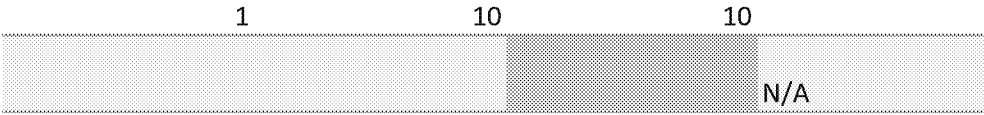
21



.....



.....



Albino rats were used in a 3-generation reproduction study (study design shown in Table 10). No information is provided on the duration of exposure; assume exposure begins at F0 mating (conception of F1 generation) and that F1, F2, and F3 generations are mated at sexual maturity (56 d). Litter size is NR; use default. Decreased mating index was observed in the second and third generations (described qualitatively in Table 12).

Aroclor 1254 administered as a single i.p. dose to males at 500 or 1000 mg/kg.

Albino rats were used in a 3-generation reproduction study (study design shown in Table 10). No information is provided on the duration of exposure; assume exposure begins at F0 mating (conception of F1 generation) and that F1, F2, and F3 generations are mated at sexual maturity (56 d). Litter size is NR; use default. Decreased mating index was observed in the second and third generations (described qualitatively in Table 12).

Aroclor 1260 administered as a single i.p. dose to males at 500 or 1000 mg/kg.

Albino rats were used in a 3-generation reproduction study (study design shown in Table 10). No information is provided on the duration of exposure; assume exposure begins at F0 mating (conception of F1 generation) and that F1, F2, and F3 generations are mated at sexual maturity (56 d). Litter size is NR; use default. Decreased mating index was observed in the second and third generations (described qualitatively in Table 12).

Aroclor 1254 administered as a single i.p. dose to males at 500 or 1000 mg/kg.

.....

22	0.9	0.094	0.154	10	21
18	0.9	0.229	0.264	6	21

22	0.9	0.094	0.154	10	21
18	0.9	0.229	0.264	6	21

22	0.9	0.094	0.154	10	21
18	0.9	0.229	0.264	6	21

22	0.9	0.094	0.154	10	21
18	0.9	0.229	0.264	6	21

Calandra	1976	2201050
Calandra	1976	2201050
Calandra	1976	2201050
Calandra	1976	2201050
Calandra	1976	2201050
Calandra	1976	2201050
Honda et al.	1983	2202042
Honda et al.	1983	2202042
Honda et al.	1983	2202042
Greene et al.	1973	2202075
Grant et al.	1972	2204253
Grant et al.	1972	2204253
Grant et al.	1972	2204253
Buha et al.	2015	2845418
Buha et al.	2015	2845418
Buha et al.	2015	2845418
Esteban et al.	2014	2845420
Esteban et al.	2014	2845420
Esteban et al.	2014	2845420
Liu et al.	2015	2849093
Reilly et al.	2015	2919758

litter size, frequency of pregnancy

litter size, frequency of pregnancy

litter size, frequency of pregnancy

liver gross and microscopic pathologyliver weightSAP, SGPT, SGOT

liver gross and microscopic pathologyliver weightSAP, SGPT, SGOT

liver gross and microscopic pathologyliver weightSAP, SGPT, SGOT

liver histopathology (examination fluorescent microscope)liver weight, liver/body weight ratio liver porphyrin (coproporphyrin)

liver histopathology (examination fluorescent microscope)liver weight, liver/body weight ratio liver porphyrin (coproporphyrin)

liver histopathology (examination fluorescent microscope)liver weight, liver/body weight ratio liver porphyrin (coproporphyrin)

liver histopathology (light and electron microscopy of liver sections)

brain weight

brain weight

liver weight

hepatic CuZn-SODserum ALT, AST, ALP

hepatic CuZn-SODserum ALT, AST, ALP

hepatic CuZn-SODserum ALT, AST, ALP

hepatic EROD, PROD and BROD enzymesliver weighthe hepatic retinoids and retinoid metabolites (hepatic retinyl palmitate)

hepatic EROD, PROD and BROD enzymesliver weighthe hepatic retinoids and retinoid metabolites (hepatic retinyl palmitate)

hepatic EROD, PROD and BROD enzymesliver weighthe hepatic retinoids and retinoid metabolites (hepatic retinyl palmitate)

histopathological changes in ovary

pup weight

Pregnancy/conception rate	Reproductive
Pregnancy/conception rate	Reproductive
Pregnancy/conception rate	Reproductive
Liver Histopathology	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Serum Biomarkers of Liver Health & Function	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Porphyrins	Hepatobiliary
Liver Histopathology	Hepatobiliary

Brain-histological, structural, morphological	Nervous System
Brain-histological, structural, morphological	Nervous System
Liver Weight/Hepatomegaly	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Micronutrients	Hepatobiliary
Serum Biomarkers of Liver Health & Function	Hepatobiliary
Liver Enzyme Induction	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Micronutrients	Hepatobiliary
Reproductive organ histopathology, female	Reproductive

Weight and size (early life)	Developmental
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Aroclor 1254

Aroclor 1260

Aroclor 1260

Aroclor 1242Aroclor 1254Aroclor 1260

Aroclor 1242Aroclor 1254Aroclor 1260

Aroclor 1242Aroclor 1254Aroclor 1260

Kanechlor 400

Kanechlor 400

Kanechlor 400

Aroclor 1221Aroclor 1242Aroclor 1254

Aroclor 1254

Aroclor 1221

Aroclor 1221Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1221

Secondary	
Primary	
Secondary	

Primary	
Primary	

Primary	90
Secondary	

-78

43

44

82

21

16

18 N/A

N/A

21

Category	Value	Value	Value
Category 1	3	1	100
Category 2	3	1	100
Category 3	3	1	100
Category 4	3	1	100
Category 5	3	1	100
Category 6	3	1	100
Category 7	3	1	100
Category 8	3	1	100
Category 9	3	1	100
Category 10	3	1	100
Category 11	3	1	100
Category 12	3	1	100
Category 13	3	1	100
Category 14	3	1	100
Category 15	3	1	100
Category 16	3	1	100
Category 17	3	1	100
Category 18	3	1	100
Category 19	3	1	100
Category 20	3	1	100
Category 21	3	1	100
Category 22	3	1	100
Category 23	3	1	100
Category 24	3	1	100
Category 25	3	1	100
Category 26	3	1	100
Category 27	3	1	100
Category 28	3	1	100
Category 29	3	1	100
Category 30	3	1	100
Category 31	3	1	100
Category 32	3	1	100
Category 33	3	1	100
Category 34	3	1	100
Category 35	3	1	100
Category 36	3	1	100
Category 37	3	1	100
Category 38	3	1	100
Category 39	3	1	100
Category 40	3	1	100
Category 41	3	1	100
Category 42	3	1	100
Category 43	3	1	100
Category 44	3	1	100
Category 45	3	1	100
Category 46	3	1	100
Category 47	3	1	100
Category 48	3	1	100
Category 49	3	1	100
Category 50	3	1	100
Category 51	3	1	100
Category 52	3	1	100
Category 53	3	1	100
Category 54	3	1	100
Category 55	3	1	100
Category 56	3	1	100
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Category 59	3	1	100
Category 60	3	1	100
Category 61	3	1	100
Category 62	3	1	100
Category 63	3	1	100
Category 64	3	1	100
Category 65	3	1	100
Category 66	3	1	100
Category 67	3	1	100
Category 68	3	1	100
Category 69	3	1	100
Category 70	3	1	100
Category 71	3	1	100
Category 72	3	1	100
Category 73	3	1	100
Category 74	3	1	100
Category 75	3	1	100
Category 76	3	1	100
Category 77	3	1	100
Category 78	3	1	100
Category 79	3	1	100
Category 80	3	1	100
Category 81	3	1	100
Category 82	3	1	100
Category 83	3	1	100
Category 84	3	1	100
Category 85	3	1	100
Category 86	3	1	100
Category 87	3	1	100
Category 88	3	1	100
Category 89	3	1	100
Category 90	3	1	100
Category 91	3	1	100
Category 92	3	1	100
Category 93	3	1	100
Category 94	3	1	100
Category 95	3	1	100
Category 96	3	1	100
Category 97	3	1	100
Category 98	3	1	100
Category 99	3	1	100
Category 100	3	1	100

[illegible]

Albino rats were used in a 3-generation reproduction study (study design shown in Table 10). No information is provided on the duration of exposure; assume exposure begins at F0 mating (conception of F1 generation) and that F1, F2, and F3 generations are mated at sexual maturity (56 d). Litter size is NR; use default. Pregnancy rate is influenced only by pre-implantation exposure (GD4 in rats). Decreased incidence of pregnancy was observed in the second and third generations (described qualitatively in Table 12).

Female wistar rats (21d) were fed Aroclor 1254 (2-200 ppm) for 1 yr via diet. Brain weight was not influenced by dietary regimens (reported in results text).

Female wistar rats (21d) were fed Aroclor 1221 (2-200ppm) for 1 yr via diet. Brain weight was not influenced by dietary regimens (reported in results text).

Adult female mice were injected ip with 0, 4, 20 or 100 mg/kg-day for ~15 days (doses every 3 days X 5) and mice were sacrificed after treatment. LOAEL based on the significant decrease in the number of primordial follicles, antral follicles, and total follicles (Figure 1). Starting age NR; assume 90 d (22 g female mice).

Dosing on GD16&18 (rats); pup body weight altered by PND90
Doses of 0.5 and 1 mg/kg administered 2x over three days
Litters were culled to 8 pups each on PND1

22	0.9	0.094	0.154	10	21
18	0.9	0.229	0.264	6	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
18	0.9	0.229	0.264	6	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
18	0.9	0.229	0.264	6	21
22	0.9	0.094	0.154	10	21

[illegible]

Reilly et al.	2015	2919758
Reilly et al.	2015	2919758
Reilly et al.	2015	2919758
Reilly et al.	2015	2919758
Reilly et al.	2015	2919758
Reilly et al.	2015	2919758
Cai et al.	2015	2919777
Meyer et al.	2015	2919792
Meyer et al.	2015	2919792
Meyer et al.	2015	2919792
Meyer et al.	2015	2919792
Meyer et al.	2015	2919792

adrenal weight

corticosterone

sociability

social novelty

ovarian weight

testis weight

sperm count and sperm motility

pup brain weight

inhibitory control performance: differential reinforcement of low rates (DRL) 15 performance (ratio of reinforced:nonreinforced lever presses and reinforcers earned)

litter size

maternal gestational and lactational weight gain

litter size

maternal gestational and lactational weight gain

dam liver weight (relative), pup liver weight (absolute and relative)

Adrenal weight	Endocrine
----------------	-----------

HPA hormones	Endocrine
Social behavior/development	Nervous System

Social behavior/development	Nervous System
Reproductive organ size/weight, female	Reproductive
Reproductive organ size/weight, male	Reproductive
Sperm/semen parameters	Reproductive

Brain-histological, structural, morphological	Nervous System
Cognitive function	Nervous System

Maternal weight gain	Reproductive
Pregnancy/conception rate	Reproductive
Liver Weight/Hepatomegaly	Hepatobiliary

Aroclor 1221

Aroclor 1221

Aroclor 1221

Aroclor 1221

Aroclor 1221

Aroclor 1221

Aroclor 1254

Fox River PCB mixture

Fox River PCB mixture

Fox River PCB mixture

Fox River PCB mixture

Fox River PCB mixture

Rat	Injection-ip
-----	--------------

Rat	Injection-ip
Rat	Injection-ip

Rat	Injection-ip
Rat	Injection-ip
Rat	Injection-ip
Mouse	Oral-gavage

Rat	Oral-cookie
Rat	Oral-cookie

Rat	Oral-cookie
Rat	Oral-cookie
Rat	Oral-cookie

Secondary	
Secondary	
Secondary	
Secondary	
Secondary	
Secondary	
Primary	21
Secondary	
Secondary	
Primary	
Primary	

		8
		8
		8
	no	8
		8
		8
	50	
	no	12.15
	no	12.71
	78	
	78	

N/A

N/A

0.33 N/A

N/A

N/A

0.33 N/A

N/A

N/A

0.0017

0.017

3

6 N/A

N/A

3 N/A

Dosing on GD16&18 (rats); serum corticosterone altered by PND90
Doses of 0.5 and 1 mg/kg administered 2x over three days
Litters were culled to 8 pups each on PND1

Dosing on GD16&18 (rats); response to social novelty altered by PND60
Doses of 0.5 and 1 mg/kg administered 2x over three days
Litters were culled to 8 pups each on PND1

Male mice (21 days old) were dosed every 3 days for 50 days. Sperm was evaluated at the end of the exposure period. Methods report doses of 0, 5, 500 µg/kg, but results are shown for 0, 0.5, 5, 50, and 500 µg/kg. No quantitative results are shown for sperm but the text says sperm abnormality was significantly increased in the 50 and 500 µg/kg groups.

Rat dams dosed for 28 d prior to mating, and continuing throughout gestation and lactation (42 d, as reported by authors). Litter size of LOAEL dose group was 12.15 (Table 4); litters were culled or cross-fostered to maintain 10 pups/litter. Pup brain weights were collected on PND 0, 7, 14 and 21. Pup brain weight was significantly altered at PND 21 at 6 mg/kg-d (Table 5).

Rat dams dosed for 28 d prior to mating, and continuing throughout gestation and lactation (42 d, as reported by authors). Litter size of LOAEL dose group was 12.71 (Table 4); litters were culled or cross-fostered to maintain 10 pups/litter. Animals began operant testing at PND 100. Learning responses were altered at 3 and 6 mg/kg-d for different metrics.

22	0.9	0.094	0.154	10	21
----	-----	-------	-------	----	----

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

18	0.9	0.229	0.264	6	21
----	-----	-------	-------	---	----

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

Poon et al.	2015	2920043
Poon et al.	2015	2920043
Poon et al.	2015	2920043
Aly et al.	2014	2920052
Aly et al.	2014	2920052
Aly et al.	2014	2920052
Wahlang et al.	2014	2920275
Wahlang et al.	2014	2920275
Wahlang et al.	2014	2920275
Wahlang et al.	2014	2920275
Liu et al.	2014	2920289
Liu et al.	2014	2920289
Liu et al.	2014	2920289
Naveau et al.	2014	2920420

audiogenic seizures

litter size

pregnancy rate

liver weight

total cholesterol liver weight serum activities of alanine aminotransferase, aspartate aminotransferase, alkaline phosphatase

total cholesterol liver weight serum activities of alanine aminotransferase, aspartate aminotransferase, alkaline phosphatase

total cholesterol liver weight serum activities of alanine aminotransferase, aspartate aminotransferase, alkaline phosphatase

liver cholesterol content, serum cholesterol liver histopathology liver triglyceride content ALT, AST

liver cholesterol content, serum cholesterol liver histopathology liver triglyceride content ALT, AST

liver cholesterol content, serum cholesterol liver histopathology liver triglyceride content ALT, AST

liver cholesterol content, serum cholesterol liver histopathology liver triglyceride content ALT, AST

rate of ovulation

oocyte activation, in vitro fertilization, and embryo development

ovarian histopathology (spindle morphology)

fetal cerebral cortex development: neuronal progenitor proliferation, cell cycle exit, differentiation rate, cell death, radial migration, and cortical laminar organization

Fox River PCB mixture

Fox River PCB mixture

Fox River PCB mixture

Aroclor 1260

Aroclor 1260

Aroclor 1260

Aroclor 1260

Aroclor 1260

Aroclor 1260

Aroclor 1260

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Secondary	

Primary	

Primary	

Primary	38.5
Primary	38.5
Secondary	

1	3	N/A
		N/A
4.2	8.3	
4.2	8.3	
N/A	6	N/A

Rat dams dosed for 28 d before breeding and throughout gestation and lactation (until weaning PND 21). On PND 2, litters were culled to 10 pups; use default. The 3 and 6 mg/kg-d dose groups exhibited higher incidence of audiogenic seizures, shorter latency to onset of seizures, and greater severity of seizures. Testing occurred in adult animals 10-12 months of age.

Female mice (age 5-6 weeks at start of experiment) were injected ip with 0, 12.5, 25, 50 mg/kg every 3 days; 3 rounds of dosing were done before superovulation was induced. There was no effect on the number of ovulated oocytes (numbers presented in text).

Female mice (age 5-6 weeks at start of experiment) were injected ip with 0, 12.5, 25, 50 mg/kg every 3 days; 3 rounds of dosing were done before superovulation was induced. LOAEL is based on significant decrease in the percentage of activated oocytes (Table 1) and decreased fertilization and embryonic development (Table 2).

Female mice (age 5-6 weeks at start of experiment) were injected ip with 0, 12.5, 25, 50 mg/kg every 3 days; 3 rounds of dosing were done before superovulation was induced. LOAEL is based on statistically significant alterations in spindle morphology (Figures 2-3). Note: TUNEL assay was also performed and effects were observed at the same doses, but we are considering that mechanistic data.

Rat dams exposed GD 6 to sacrifice. "Dams were sacrificed either at E17 or E19 to study cell proliferation, S phase and cell cycle exit, at E17 for cell death and neuronal differentiation rate and at E20 for neuronal migration, laminar organization and radial glia study." Cell cycle and neuronal migration altered (Fig 2-6). Litter size NR; use default.

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Nam et al.	2014	2920493
Nam et al.	2014	2920493
Nam et al.	2014	2920493
Nam et al.	2014	2920493
Hu et al.	2015	3005022
Hu et al.	2015	3005022
Hu et al.	2015	3005022
Hu et al.	2015	3005022
Hu et al.	2015	3005022
Lombardo et al.	2015	3007891
Lombardo et al.	2015	3007891
Folland et al.	2015	3063353
Folland et al.	2015	3063353
Folland et al.	2015	3063353
Elnar et al.	2016	3121413

open field behavior

novel object recognition

open field behavior

elevated plus maze

histological changes in uterus
uterine weight

histological changes in uterus
uterine weight

metabolic enzymes (CYP1A1, 1A2, 1B1, 2A1, 2B1, 3A23/3A1, UGT1A1, GSTA2, SULT1A1, 2A1, and 1E1)liver histopathology
metabolic enzymes (CYP1A1, 1A2, 1B1, 2A1, 2B1, 3A23/3A1, UGT1A1, GSTA2, SULT1A1, 2A1, and 1E1)liver histopathology
metabolic enzymes (CYP1A1, 1A2, 1B1, 2A1, 2B1, 3A23/3A1, UGT1A1, GSTA2, SULT1A1, 2A1, and 1E1)liver histopathology

hyperactivity

operant conditioning

EROD activityhistopathology examinationliver weight
EROD activityhistopathology examinationliver weight
EROD activityhistopathology examinationliver weight

short-term spatial memory (Y-maze)

Activity level	Nervous System
----------------	----------------

Cognitive function	Nervous System
Emotional state/affective behavior	Nervous System

Emotional state/affective behavior	Nervous System
Reproductive organ histopathology, female	Reproductive

Reproductive organ size/weight, female	Reproductive
Liver Enzyme Induction	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary

Activity level	Nervous System
Cognitive function	Nervous System
Liver Enzyme Induction	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Cognitive function	Nervous System

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Chicago Air Mixture

Chicago Air Mixture

Chicago Air Mixture

Chicago Air Mixture

Chicago Air Mixture

Aroclor 1248

Aroclor 1248

Aroclor 1268

Aroclor 1268

Aroclor 1268

Mixture: PCBs 28, 52, 101, 138, 153, 180

					no									
					6									
					no									
					6									
					no									
					6									
					no									
					6									
					28									
					28									
					30									
					30									
					10									

N/A	18	18
-----	----	----

N/A	18	18
N/A	18	18

N/A	18	18
N/A	0.0006	
N/A	0.0006	
0.00001	N/A	N/A

"Maternal injection of Aroclor1254 (18 mg/kg/day) was performed from GD 6 to PND 21 (total: 35 days). After weaning at PND 21, offspring received Aroclor 1254 (18 mg/kg, p.o.)...until PND 35." All outcomes evaluated at PND35. Litter size NR; use default value.

"Maternal injection of Aroclor1254 (18 mg/kg/day) was performed from GD 6 to PND 21 (total: 35 days). After weaning at PND 21, offspring received Aroclor 1254 (18 mg/kg, p.o.)...until PND 35." All outcomes evaluated at PND35. Litter size NR; use default value.

"Maternal injection of Aroclor1254 (18 mg/kg/day) was performed from GD 6 to PND 21 (total: 35 days). After weaning at PND 21, offspring received Aroclor 1254 (18 mg/kg, p.o.)...until PND 35." All outcomes evaluated at PND35. Litter size NR; use default value.

"Maternal injection of Aroclor1254 (18 mg/kg/day) was performed from GD 6 to PND 21 (total: 35 days). After weaning at PND 21, offspring received Aroclor 1254 (18 mg/kg, p.o.)...until PND 35." All outcomes evaluated at PND35. Litter size NR; use default value.

0, 533 ± 93 µg/m³ (whole body or nose)

0, 533 ± 93 µg/m³ (whole body or nose)

Reported concentration of PCBs in air: 562 ng/m³; converted to mg/kg-d using subchronic reference values for body weight (0.267 kg male, 0.204 kg female) and inhalation rate (0.27 m³/d male, 0.22 m³/d female) provided for Sprague-Dawley rats in EPA 1988.

Starting age of animals 35 d as reported in Table 1

Reported concentration of PCBs in air: 562 ng/m³; converted to mg/kg-d using subchronic reference values for body weight (0.267 kg male, 0.204 kg female) and inhalation rate (0.27 m³/d male, 0.22 m³/d female) provided for Sprague-Dawley rats in EPA 1988.

Starting age of animals 35 d as reported in Table 1

Litters culled to 10 on PND0

18	0.9	0.229	0.264	6	21
----	-----	-------	-------	---	----

18	0.9	0.229	0.264	6	21
----	-----	-------	-------	---	----

18	0.9	0.229	0.264	6	21
----	-----	-------	-------	---	----

18	0.9	0.229	0.264	6	21
----	-----	-------	-------	---	----

22	0.9	0.094	0.154	10	21
----	-----	-------	-------	----	----

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
----	-----	-------	-------	----	----

22	0.9	0.094	0.154	10	21
52	0.9	0.312	0.066	5	56
52	0.9	0.312	0.066	5	56
52	0.9	0.312	0.066	5	56

18	0.9	0.229	0.264	6	21
----	-----	-------	-------	---	----

Bandara et al.	2016	3350985
Sumathi et al.	2016	3351130
Sumathi et al.	2016	3351130
Sumathi et al.	2016	3351130
Sumathi et al.	2016	3351130
Sumathi et al.	2016	3351130
Tang et al.	2015	3351160
Bell et al.	2016	3351276
Bell et al.	2016	3351276
Wahlang et al.	2016	3351296
Wahlang et al.	2016	3351296
Wahlang et al.	2016	3351296
Wahlang et al.	2016	3351296
Wahlang et al.	2016	3351296
Bell et al.	2016	3351306
Bell et al.	2016	3351306
Bell et al.	2016	3351306
Bell et al.	2016	3351306
Bell et al.	2016	3351306
Bell et al.	2016	3351306
Bell et al.	2016	3351306

audiogenic seizures

locomotor activity (open field)

muscle grip strength (rotarod)

brain histopathology

spatial memory (MWM), radial arm maze

righting reflex, cliff drop test response, negative geotaxis

sex hormone levels

sex hormone levels

activity level

liver cholesterol contentliver histopathologyliver triglyceride contentplasma ALT and AST activities

liver cholesterol contentliver histopathologyliver triglyceride contentplasma ALT and AST activities

liver cholesterol contentliver histopathologyliver triglyceride contentplasma ALT and AST activities

liver cholesterol contentliver histopathologyliver triglyceride contentplasma ALT and AST activities

anogenital distance

eye opening

litter size

sex ratio

pup weight

pup weight

adrenal weight

Sensory function	Nervous System
Activity level	Nervous System
Motor function	Nervous System
Brain-histological, structural, morphological	Nervous System
Cognitive function	Nervous System
Motor function	Nervous System
Sex hormone levels, female	Reproductive
Sex hormone levels, male	Reproductive

Activity level	Nervous System
Cholesterol	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Lipids/Steatosis	Hepatobiliary
Serum Biomarkers of Liver Health & Function	Hepatobiliary
Anogenital distance	Developmental
Developmental milestones	Developmental
Offspring mortality	Developmental
Sex ratio	Developmental
Weight and size (early life)	Developmental

Weight and size (early life)	Developmental
Adrenal weight	Endocrine

Fox River PCB mixture

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1221

Aroclor 1221

Aroclor 1260

Aroclor 1260

Aroclor 1260

Aroclor 1260

Aroclor 1260

Aroclor 1221

Aroclor 1221

Aroclor 1221

Aroclor 1221

Aroclor 1221

Aroclor 1221

Aroclor 1221

Rat	Oral-cookie
Rat	Injection-ip
Rat	Injection-ip
Rat	Injection-ip
Rat	Injection-ip
mouse	Oral-gavage
CHECK	CHECK
CHECK	CHECK

Mouse	Oral-gavage
Mouse	Oral-gavage
Mouse	Oral-gavage
Mouse	Oral-gavage
Mouse	Oral-gavage
Rat	Injection-ip
Rat	Injection-ip
Rat	Injection-ip
Rat	Injection-ip
Rat	Injection-ip

Rat	Injection-ip
Rat	Injection-ip

-28

43 N/A

N/A

21

6

23 N/A

N/A

5

16

20 N/A

N/A

7

	112	2	2	6	6
			2	2	2
			2	2	2
	23	2	2	1.5	1.5
			2	0.6	0.6
			2	0.6	0.6

N/A	6	N/A	
N/A	2		
N/A	2		
N/A	1.5	N/A	
			N/A
			N/A
			N/A
			N/A
			N/A
N/A	0.6	N/A	
N/A	0.6		
			N/A

Rat dams dosed for 28 d before breeding and throughout gestation and lactation (until weaning PND 21). On PND 2, litters were culled to 10 pups; use default. Audiogenic seizures were observed in PCB-exposed group. Testing occurred at PND 90.

Starting age NR; 200-250 g male albino rats; assume 90 d

Starting age NR; 200-250 g male albino rats; assume 90 d

Mouse dams dosed GD6 to PND 21. Litter size NR; use default. Culled to 6 pups per litter by PND 1. Postnatal assessments were conducted every 2 d from PND 3 to 21. Fig 1 shows the righting reflex/cliff drop/and negative geotaxis results; effects observed by PND 5.

Single dose (20 mg/kg) in male mice (8 wk of age). Activity level assessed 12 wk later. No effect of exposure on activity level in wild type mice (Figure 3B).

Dams dosed on GD16, 18 & 20; pup weight altered by PND7
Mean litter size of LOAEL dose group was 11.33 pups as reported in Supplemental Table 2
Reported study dose of 1 mg/kg-d adjusted for continuous exposure (3 mg/kg-d administered over 5 d)

Pups dosed directly on PND 24, 26 & 28; pup weight affected by PND49
Reported study dose of 1 mg/kg-d adjusted for continuous exposure (3 mg/kg-d administered over 5 d)

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
18	0.9	0.229	0.264	6	21
CHECK	0.9	CHECK	CHECK	CHECK	CHECK
CHECK	0.9	CHECK	CHECK	CHECK	CHECK
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

Not reported (interpreted as Deficient)	Good	Adequate
Not reported (interpreted as Deficient)	Good	Adequate
Not reported (interpreted as Deficient)	Good	Adequate
Not reported (interpreted as Deficient)	Good	Adequate
Adequate	Good	Adequate
Adequate	Good	Adequate
Adequate	Good	Adequate
Adequate	Good	Adequate
Adequate	Good	Adequate
Adequate	Good	Adequate
Adequate	Good	Adequate

Bell et al.	2016	3351306
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Bell et al.	2016	3351306
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elevated plus maze and light-dark box (anxiety)

sociosexual interactions, ultrasonic vocalizations and affiliative behavior, sociability

Emotional state/affective behavior

Nervous System

Social behavior/development

Nervous System

Aroclor 1221

Aroclor 1221

Rat

Injection-ip

Rat

Injection-ip

Secondary

Secondary

no

11.33

no

11.33

21

21

57

2

2

0.6

0.6

53

2

2

0.6

0.6

N/A

0.6 N/A

N/A

0.6 N/A

Dams dosed on GD16, 18 & 20; PND35-36: "...females exposed to PCBs during prenatal development showed more entries into the light side than females not exposed at that time, independent of any subsequent juvenile exposure..."
Mean litter size of LOAEL dose group was 11.33 pups as reported in Supplemental Table 2
Reported study dose of 1 mg/kg-d adjusted for continuous exposure (3 mg/kg-d administered over 5 d)

Dams dosed on GD16, 18 & 20; reported study dose of 1 mg/kg-d adjusted for continuous exposure (3 mg/kg-d administered over 5 d)

Mean litter size of LOAEL dose group was 11.33 pups as reported in Supplemental Table 2

PND31: "On day 2, a main effect of prenatal exposure was found on flat calls in the pre-stimulus session...with more calls in the prenatal A1221 than the Veh females."

PND90: "Prenatal exposure increased the number of flat calls in the session preceding the opposite sex interaction in males, independent of juvenile exposure...Males exposed to PCBs prenatally spent less time near a no-hormone stimulus animal than animals not exposed prenatally, independent of juvenile exposure...As no significant effects were seen on time spent near a hormone stimulus animal...this effect drove the preference for a hormone-treated stimulus animal in prenatally exposed males..."

22

0.9

0.094

0.154

10

21

22

0.9

0.094

0.154

10

21

Adequate

Good

Adequate

Adequate

Good

Adequate

Bell et al.	2016	3351306
Bell et al.	2016	3351306
Bell et al.	2016	3351306
Bell et al.	2016	3351306
Bell et al.	2016	3351306
Bell et al.	2016	3351306
Folland et al.	2016	3351480
Folland et al.	2016	3351480
Shan et al.	2015	3351680
Shan et al.	2015	3351680
Garcia et al.	2016	3748820
Garcia et al.	2016	3748820
Wahlang et al.	2017	3982706

sociosexual interactions, ultrasonic vocalizations and affiliative behavior, sociability

estrous cyclicity

puberty onset, females

puberty onset, males

gonad weight, females

testes weight

total kit number

total kit number

liver histopathologyliver serum alanine aminotransferase activity, liver asparate aminotransferase activity

liver histopathologyliver serum alanine aminotransferase activity, liver asparate aminotransferase activity

liver histopathologyliver weight

liver histopathologyliver weight

steatosis (FLD), steatic hepatitis (neutrophil infiltration), fibrosis, liver histopathologyliver weight

Social behavior/development	Nervous System
Estrous/menstrual cycle characteristics	Reproductive

Pubertal development, female	Reproductive
Pubertal development, male	Reproductive

Reproductive organ size/weight, female	Reproductive
Reproductive organ size/weight, male	Reproductive
Gestation length and preterm birth	Reproductive
Pregnancy/conception rate	Reproductive
Liver Histopathology	Hepatobiliary
Serum Biomarkers of Liver Health & Function	Hepatobiliary
Liver Histopathology	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Liver Histopathology	Hepatobiliary

Aroclor 1221

Aroclor 1221

Aroclor 1221

Aroclor 1221

Aroclor 1221

Aroclor 1221

Aroclor 1268

Aroclor 1268

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1254

Aroclor 1260

Rat	Injection-ip
Rat	Injection-ip

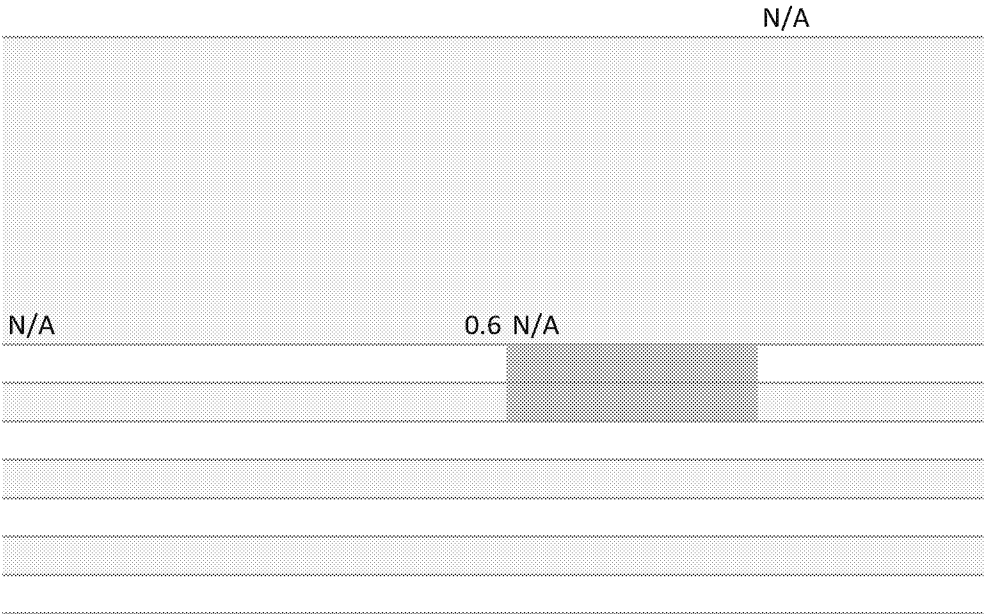
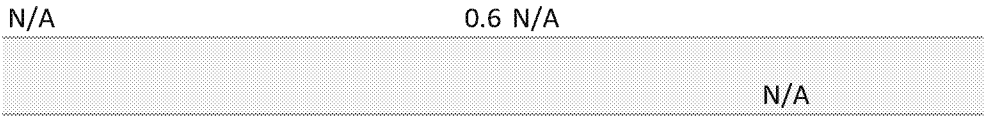
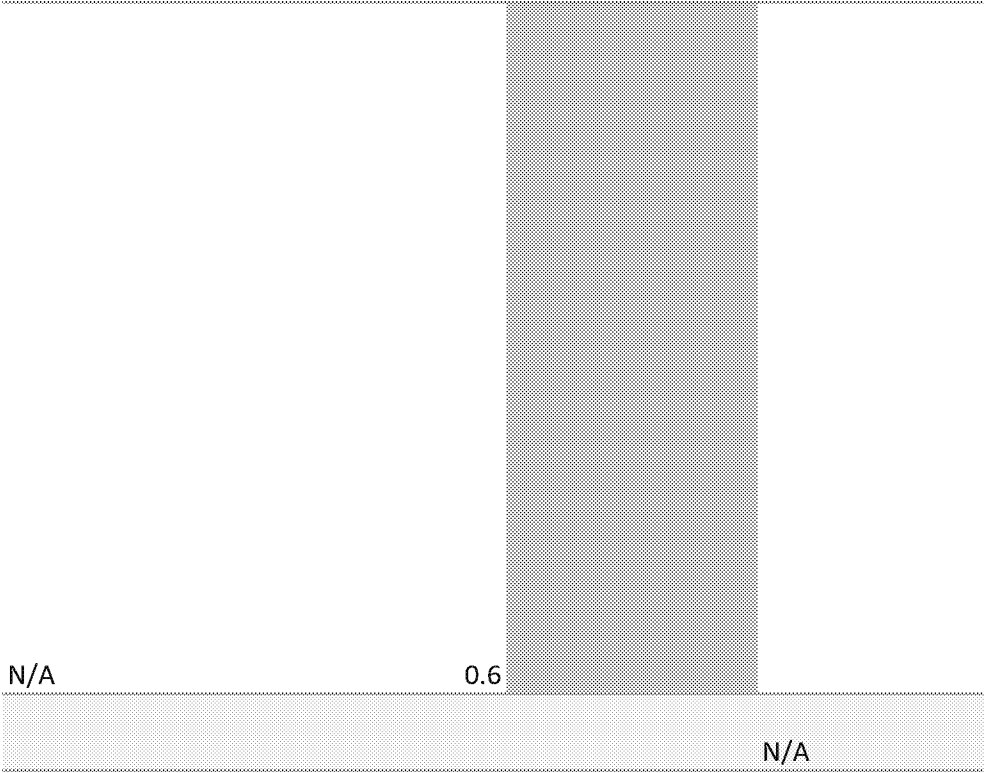
Rat	Injection-ip
Rat	Injection-ip
Rat	Injection-ip
Rat	Injection-ip
Mink	Oral-diet
Mink	Oral-diet
Mouse	Injection-ip
Mouse	Injection-ip
Rat	Oral-gavage
Rat	Oral-gavage
Mouse	Oral-gavage

Primary	24
Secondary	
Secondary	
Secondary	
Secondary	
Secondary	
Primary	730-1095
Primary	730-1095

5

11.33

11.33



Pups dosed directly on PND 24, 26 & 28; reported study dose of 1 mg/kg-d adjusted for continuous exposure (3 mg/kg-d administered over 5 d)

≥ PND30: "In females, a main effect of juvenile exposure was found...such that latency to hop was longer in juvenile A1221 compared to Veh females, regardless of their prenatal exposure"

≥ PND33: "...females (but not males) exposed to juvenile PCBs showed a longer latency to reach that area near the stimulus animal..."

PND90: "Juvenile exposed males spent more time with the no-hormone female than did unexposed males...This effect, together with the nonsignificant increase in time spent with the hormone-treated stimulus females, resulted in the observation that males with juvenile exposure spent more time with both stimulus animals than males not exposed at that time..."

Dams dosed on GD16, 18 & 20; > PND33: "Prenatal A1221 exposure delayed vaginal opening by approximately a day in females..."

Mean litter size of LOAEL dose group was 11.33 pups as reported in Supplemental Table 2

Reported study dose of 1 mg/kg-d adjusted for continuous exposure (3 mg/kg-d administered over 5 d)

Dams dosed on GD16, 18 & 20; "Prenatal PCBs also decreased gonad weight at time of sacrifice in males..."

Mean litter size of LOAEL dose group was 11.33 pups as reported in Supplemental Table 2

Reported study dose of 1 mg/kg-d adjusted for continuous exposure (3 mg/kg-d administered over 5 d)

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
52	0.9	0.312	0.066	5	56
52	0.9	0.312	0.066	5	56
18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
CHECK	0.9	CHECK	CHECK	CHECK	
CHECK	0.9	CHECK	CHECK	CHECK	
18	0.9	0.229	0.264	6	21

Adequate

Good

Adequate

Adequate

Good

Adequate

Adequate

Good

Adequate

Adequate

Good

Adequate

Adequate

Good

Adequate

Adequate

Good

Adequate

Wahlang et al.	2017	3982706
Wahlang et al.	2017	3982706
Gillette et al.	2017	3982717
Gillette et al.	2017	3982717
Gillette et al.	2017	3982717
Gillette et al.	2017	3982717
Gillette et al.	2017	3982717
Gillette et al.	2017	3982717
Gillette et al.	2017	3982717
Gillette et al.	2017	3982717
Gillette et al.	2017	3982717
Monaikul et al.	2017	3983676
Miller et al.	2017	3984651
Miller et al.	2017	3984651
Miller et al.	2017	3985147
Miller et al.	2017	3985147
Bavithra et al.	2017	3985422
Bavithra et al.	2017	3985422
Bavithra et al.	2017	3985422
Bavithra et al.	2017	3985422

steatosis (FLD), steatic hepatitis (neutrophil infiltration), fibrosis, liver histopathologyliver weight
steatosis (FLD), steatic hepatitis (neutrophil infiltration), fibrosis, liver histopathologyliver weight
AGD

age at eye opening

litter size, resorptions

sex ratio

pup weight

elevated plus maze and light-dark box (anxiety)

day of vaginal opening

day of preputial separation

testosterone levels in males

operant behavior

activity box

behavioral sensitization to cocaine

operant testing

cocaine self-administration

open field

rotarod

brain histopathology

elevated plus maze, open field

Liver Lipids/Steatosis	Hepatobiliary
Liver Weight/Hepatomegaly	Hepatobiliary
Anogenital distance	Developmental
Developmental milestones	Developmental
Offspring mortality	Developmental
Sex ratio	Developmental
Weight and size (early life)	Developmental

Emotional state/affective behavior	Nervous System
Pubertal development, female	Reproductive

Pubertal development, male	Reproductive
Sex hormone levels, male	Reproductive
Cognitive function	Nervous System
Activity level	Nervous System

Emotional state/affective behavior	Nervous System
Cognitive function	Nervous System

Emotional state/affective behavior	Nervous System
Activity level	Nervous System
Motor function	Nervous System
Brain-histological, structural, morphological	Nervous System
Emotional state/affective behavior	Nervous System

Mouse	Oral-gavage
Mouse	Oral-gavage
Rat	Injection-ip
Rat	Injection-ip
Rat	Injection-ip
Rat	Injection-ip
Rat	Injection-ip

Rat	Injection-ip
Rat	Injection-ip

Rat	Injection-ip
Rat	Injection-ip
Rat	Oral-syringe
Rat	Oral-cookie
Rat	Oral-cookie
Rat	Oral-cookie
Rat	Oral-cookie
Rat	Injection-ip
Rat	Injection-ip
Rat	Injection-ip
Rat	Injection-ip

Secondary	
Secondary	
Secondary	
Secondary	
Secondary	
Secondary	
Secondary	
Secondary	
Secondary	
Primary	27
Secondary	
Secondary	
Secondary	
Secondary	
Primary	NR (180-200 g males)
Primary	NR (180-200 g males)
Primary	NR (180-200 g males)
Primary	NR (180-200 g males)

	N/A
	N/A
	N/A
	N/A
N/A	0.33 N/A

0.33	0.67 N/A
	N/A

0.33	0.67 N/A
	N/A
N/A	3
N/A	3 N/A
3	6 N/A
	N/A

3	6 N/A
N/A	2
N/A	2
N/A	2
N/A	2

Effects on pup weight observed by PND21 (0.5 mg/kg-day); AGD = NOAEL; offspring mortality = NOAEL; sex ratio = NOAEL

Effects on pup weight observed by PND21

Doses of 0.5 and 1.0 mg/kg-day administered on GD 16 and 18

Litter size of ~13 estimated from LOAEL dose group data provided in Figure 1

Effects on light:dark box behavior observed at PND60

Doses of 0.5 and 1.0 mg/kg-day administered on GD 16 and 18

Litter size of ~12 estimated from LOAEL dose group data provided in Figure 1

Effects on preputial separation

Doses of 0.5 and 1.0 mg/kg-day administered on GD 16 and 18

Litter size of ~12 estimated from LOAEL dose group data provided in Figure 1

Dosing from PND27-50

Altered activity level at PND90

Litter size NR; use default

Altered sensitization to cocaine after PND 90

Difference in cocaine infusion rate after PND 90

Litter size NR; use default

N/A

N/A

N/A

N/A

18	0.9	0.229	0.264	6	21
18	0.9	0.229	0.264	6	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21
22	0.9	0.094	0.154	10	21

Primary
Secondary
Primary, pre-weaning